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A Digital Hydraulic Valve, Actuated Using a Piezoelectric Linear Motor

Brian C. Bevill
Purdue University, bcbevill@purdue.edu

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Purdue University West Lafayette, Indiana

College of Technology

A Digital Hydraulic Valve, Actuated Using a Piezoelectric Linear Motor

In partial fulfillment of the requirements for the
Degree of Master of Science in Technology

A Directed Project Report

By

Brian Bevill

Committee Member	Approval Signature	Date
Henry Zhang, Chair	_____	_____
Richard Mark French	_____	_____
Bradley Harriger	_____	_____

College of Technology
Graduate Studies

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Title of Directed Project: A Digital Hydraulic Valve, Actuated Using a Piezoelectric Linear Motor

For the degree of Masters

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To my family and friends for their support and guidance, especially my parents who believed in me from the start. And to Andrea, because she is awesome.

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TABLE OF CONTENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF FIGURES

ABSTRACT

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Major Professor: Dr. Henry Zhang

Proportional control in hydraulics is widely utilized. The most widely used current types of proportional valves utilize solenoid technology. While this technology has been around for decades and has been proven an effective means of control, there is always a demand for improved performance of advancing technologies. Integrating piezoelectric devices as a means to control hydraulic systems helps advance control for hydraulic systems.

Piezoelectric stack devices have been used to control hydraulic systems with success. Advantages of these stacks include being relatively small with a high power to weight ratio, using less energy than solenoid operations, and being fast acting. The main disadvantage to these piezoelectric stacks is the small amount of displacement. This research focuses on the use of a piezoelectric linear motor to control a proportional regulator valve.

After a literature review was conducted, a mathematical model was developed to determine valve performance. The motor performance was tested under 4 loading conditions and the velocity curves were plotted for different velocities. The valve was printed using 3D printing and then tests were

conducted to determine flow rates and pressures for the rapid prototyped proportional hydraulic regulator valve. It was found that a piezoelectric linear motor can be used as a means to control a proportional valve. However, the rapid prototyped design was determined to have drawbacks that hindered performance noticeably.

SECTION 1. INTRODUCTION

This section discloses the research question followed by information detailing the reason for the study. This section concludes with definitions, assumptions, limitations, and delimitations.

1.1. Statement of Purpose

The purpose of this project is to successfully digitally control a rapid prototyped proportional hydraulic regulator valve using a linear piezoelectric motor as an actuator. The sense of "digital" in this application is not the condition where the valve is only open or only closed, but is that the spool and the check ball displacement can be stepped in very fine, repeatable increments with accuracy in the micro-meter range, and therefore create linear steps in line pressure. The completion of this project should offer an alternative design method to piezoelectric driven digital hydraulics.

1.2. Research Question

Can a linear piezoelectric motor used in combination with a simple check valve be used to digitally control a rapid prototyped proportional hydraulic regulator valve with micrometer precision?

1.3. Scope

This project is the realization of the digital control of a proportional hydraulic regulator valve using a linear piezoelectric motor. The piezoelectric motor will control check valve position, which adjusts hydraulic pressure on the spring returned spool. Therefore, the spool position can be controlled. The New Scale MC1100 controller and Tracker sensor is used in order to have closed loop control of the check valve and produce digital steps in the line pressure.

1.4. Significance

This research should add to the body of knowledge in digital hydraulics by creating an alternative method of controlling a digital proportional regulator valve. The results of this project could apply to areas in manufacturing that require high precision, high accuracy hydraulic actuators that require or could benefit from digital proportional control.

1.5. Definitions

Piezoelectricity: "The generation of electricity or of electric polarity in dielectric crystals subjected to mechanical stress, or the generation of stress in such crystals subjected to an applied voltage." (The Free Dictionary)

PZT: Lead zirconate titanate

1.6. Assumptions

This study assumes the following conditions:

- It is assumed that measurement devices associated with the hydraulic test stand are accurate and have been properly maintained and calibrated.
- It is assumed that all parts were manufactured to design specifications.
- Digital control is assumed to be repeatable, incremental displacement of the line pressure.

1.7. Limitations

This study has the following limitations:

- A Bosch hydraulic test stand in the hydraulics laboratory of Knoy 114 was used to operate the proposed valve.
- The linear piezoelectric motor was a New Scale Technologies SQL 3.4 motor.

- The position sensor for the piezoelectric motor was a New Scale Technologies Tracker sensor.
- A LabView program (Figure A-2) was used to control and acquire data from the proposed valve.
- Flow readings were acquired through beaker and timer method.

1.8. Delimitations

This study has the following delimitations:

- The time the valve takes to move from one position to the next is not considered.
- Temperature is not regulated for the hydraulic system.

1.9. Section Summary

This section introduced the proposal by defining the project's research question, scope, significance, related definitions, assumptions, limitations, and delimitations. The following section will review relevant literature related to the area of research.

SECTION 2. LITERATURE REVIEW

This section provides a summary of research literature in the area of piezoelectrically operated hydraulic valves and the type of digital control used to operate them.

2.1. Introduction

This project is a realization of a theoretical approach to a digitally controlled proportional hydraulic regulator valve which utilizes a linear piezoelectric motor, taken from a study done by Zhang and Haran (2009). Through the use of mathematical modeling and equivalent circuit method, their study suggests that the proposed design in this project should work.

2.2. Background Information on Digital Hydraulics

The concept of digitally controlled hydraulics has been desired ever since the idea of applying computer control to a hydraulic system was conceived. The need for this application is a basic concept: the more precise the control that can be obtained on a hydraulic valve, the more control over the system will be gained. This leads to higher system efficiencies and much more precise control of positioning compared to analog systems. Digital control of hydraulics also offers flexibility to a wide range of uses because they are easy to install and

program. Because digital hydraulics have programming capabilities, fluid flow and gain can be manipulated on the fly (Au, 1994).

The speed at which a valve can open or close is limited by its own natural frequency. This must be taken into account in the digital control of a valve, because a quick response in switching is desired. This frequency is calculated using the spool's stroke, bulk modulus, and the load applied to the spool. The phase lag of the valve is also critical to the operation of a digital hydraulic valve. Au (1994) defines phase lag as "the ability of the valve spool or flapper to follow commands from the digital controller" (p. 64). In the interest of digital operation of the valve, the phase lag needs to be "three to five times the actuator's natural frequency" (Au, 1994, p. 64).

PID controls can be utilized in digital hydraulic operations to control actuator oscillation, hysteresis, and aid in smoothing actuations. With digital controls the sensors that are a part of the system can now be detected, which allows loss of sensor errors to be identified and add safety to such an event. Historically, loss of sensor errors usually resulted in the full extension or retraction of an actuator, which caused serious safety hazards for nearby workers. With sensor detection available, safety factors can be relaxed in designs and will reduce manufacturing costs. Digital hydraulics can also make industrial applications safer for those who use them (Au, 1994).

2.3. Previous Piezoelectric Actuated Hydraulic Valves

Various researchers: (Ouyang et al., 2008; Pingchao, Zongxia, Hongmei, Shuli, and Yunhua, 2006; Sente, Volebergh, Labrique, and Alexandre, 2008; Wu,

Kim, Ju, and Allen, 2008; Yokota and Akutu, 1991; Zhou et al., 2005) have demonstrated successful attempts to control a hydraulic valve digitally using piezoelectric stack type actuators. PZT stack actuators have high power to weight ratios and are used because of that attribute. However, because they operate by the piezoelectric effect, their displacements are very small. The challenge for the authors mentioned above was to make use of these small displacements to control valve positions. Research done by Wu et al. (2008), Sente et al. (2008) and Pingchao et al. (2006) show that the piezoelectric stack actuators can be used in combination with displacement amplifiers in order to achieve more displacement for their needs.

The piezoelectric stack actuators have been used in combination with displacement amplifiers to control the positioning of a valve in the research done by Wu et al. (2008), Sente et al. (2008), and Pingchao et al. (2006). Each group of researchers shows very different kinds of displacement amplifiers. Wu et al. (2008) developed a micro valve that uses an elastomer as its amplification means as well as its valve mechanism. When the piezoelectric stack is excited the elastomer is wedged into an opening and is partly extruded enough to close off the flow. The design proved to be very effective in the amplification of the piezoelectric stack displacement, achieving an amplification ratio of 5.04:1. Sente et al. (2008) used a patented mechanical amplifier that utilizes two piezoelectric stack actuators. This mechanical amplifier is then connected to a spool valve and controls its positions. Pingchao et al. (2006) uses a pair of piezoelectric stack actuators that move individual levers. In this design the levers

take the form of a displacement amplifier and are connected to either side of a spool valve. The reason these designs used displacement amplifiers as a means to control valve position is because the piezoelectric stack actuator's displacements are too small to create usable change in the positions of the valves.

Research done by Zhou et al. (2005) and Yokota and Akutu (1991) demonstrates direct linkage of the piezoelectric stack to the valve switching mechanism. In both of these designs, the displacement of the piezoelectric stack equals the displacement of the spool. In order for this method to work, they had to make the valve small enough to allow the tiny displacements to change valve operating position. These valves are very small due to the limitations of the actuator chosen. The main difference between the two designs is that in the Yokota and Akutu (1991) design the authors utilized a dual poppet to perform switching, however in the Zhou et al. (2005) design, a simple spool is used. Both of the designs managed to perform quick switching utilizing completely different control techniques.

The research done by Ouyang et al. (2008) uses a design that utilizes a piezoelectric stack actuator to control the flow of hydraulic fluid through an orifice. The spool is not directly driven by the piezoelectric actuator like the previously discussed designs, but instead the hydraulic fluid from the pump is what moves the spool. The orifice acts as a relief valve and controls the amount of pressure acting on the spool. The piezoelectric stack actuator is a cartridge valve that can be easily replaced if necessary. The tests run on this system showed that

switching time of the valve took 6.5 seconds when the cartridge valve closed the orifice and nine seconds when it opened the orifice. This design shows obvious disadvantages with its slow response. Yet it does prove that the hydraulic fluid from the pump can be used to position the spool and control switching or hydraulic ports.

2.4. Other Piezoelectric Controlled Hydraulic Valves

Chiang et al. (2005) and Chiang (2010) both identify a hybrid application for piezoelectric stack actuators used with ordinary solenoid operated valves. The reason for this hybrid configuration is to obtain high precision movements of the hydraulic actuators. The piezoelectric stack acts as a fine tuned positioner for the hydraulic actuator and also reduces oscillations in the hydraulic actuator when it stops moving. The research done by Chiang et al. (2005) showed oscillations of only 0.1 μm after 0.756 sec from moving to a new position. The research done by Chiang (2010) used the same approach to control the hydraulic actuator and achieved 20 nm of oscillations after three seconds.

Another type of piezoelectric actuator utilized in valve positioning is a piezoelectric bimorph. The piezoelectric bimorph simply bows in two directions. This actuator was used in the research of Shao, Rummler, and Schomburg (2004) and Yun, Lee, Kim, and So (2006). The design of Shao, Rummler, and Schomburg (2004) used a silicone diaphragm attached to a piezoelectric bimorph that would open and close the micro valve. Yun, Lee, Kim, and So (2006)

constructed a pneumatic valve which operated by using the piezoelectric bimorph to switch the valve position.

2.5. Continuation of Theoretical Work

The research done by Zhang and Haran (2009) shows the complete theoretical approach to this directed project. The research shows that there are several functions needed of a digital valve: PCM (Pulse Code Modulation) control of the electro-hydro or electro-mechanical converter with a digital input, low power demand, no digital to analog converters/amplifiers, and a linear displacement amplifier mechanism with fine steps or with no steps (Zhang and Haran, 2009, p. 21). The use of piezo stacks has been favored to control on/off type valves since 1970's. Drawbacks to this method are its high voltage input and small displacements. One benefit of using linear piezoelectric motors is that they require less than one Watt to operate, which means they can be directly driven from a microprocessor with PCM. Additionally, at low speeds they have a high power to weight ratio with higher efficiencies than electromagnetic motors of small size and low power. Linear motors also have excellent positioning and do not emit magnetic waves. The emitting of magnetic waves can be unwanted in some applications.

The linear piezoelectric motor shown in Figure 1 is comprised of a tubular stator and a threaded rod. The stator is made of stainless steel with four PZT plates on its sides parallel to the hole through the middle. A small section in the middle of the stators hole is threaded and is what makes the contact to the threaded rod rotor. The PZT plates operate in pairs at a 90°phase difference at

the structure's resonant frequency. "The two orthogonal single-mode standing waves with the phase difference both time-wise and space-wise are superposed to produce a travelling wave" (Zhang and Haran, 2009, p. 23). The stator is actually moving in an elliptical motion which causes the threads of the stator and the rotor to engage and turns the rotor creating rotational and linear motion.

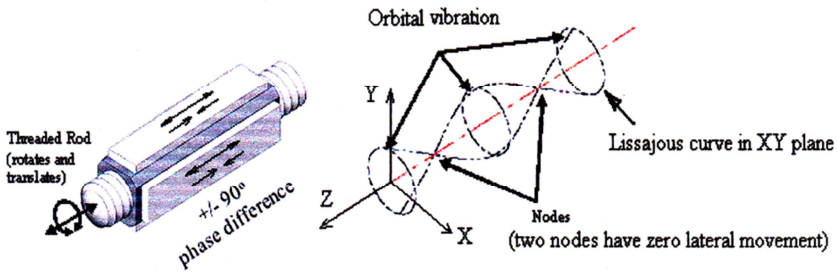


Figure 1: Linear piezoelectric motor (Zhang and Haran, 2009)

This design utilizes hydraulic pressure to move the main spool. The linear piezoelectric motor pushes a small spool, which in turn pushes a small ball that acts as a check ball valve. This check ball valve controls the pressure that the main spool experiences and thus controls its position. Because the linear piezoelectric motor has very fine positioning capability when coupled with a feedback position sensor, the opening of the check ball valve can be finely controlled up to 0.5 μm. Zhang and Haran (2009) illustrate that "the hydraulic pressure in front of the check ball provides a preload to the threaded rod, so that the tangential friction torque between the rotor and the tubular starter can generate the instantaneous rotation and translation" (p 30).

2.6. Summary

This section has provided an overview of the literature related to the topic of piezoelectrically controlled hydraulic valves. It has identified that the use of a linear piezoelectric motor as a means to control valve position is conceivable.

SECTION 3. METHODOLOGY

This section covers the mathematical model, research framework, methods, and data analysis used in this study.

3.1. Mathematical Model

This project is based off of the mathematical model of the digital proportional regulator valve. Figure 2 shows the schematic of the digital proportional regulator valve with labels of critical features.

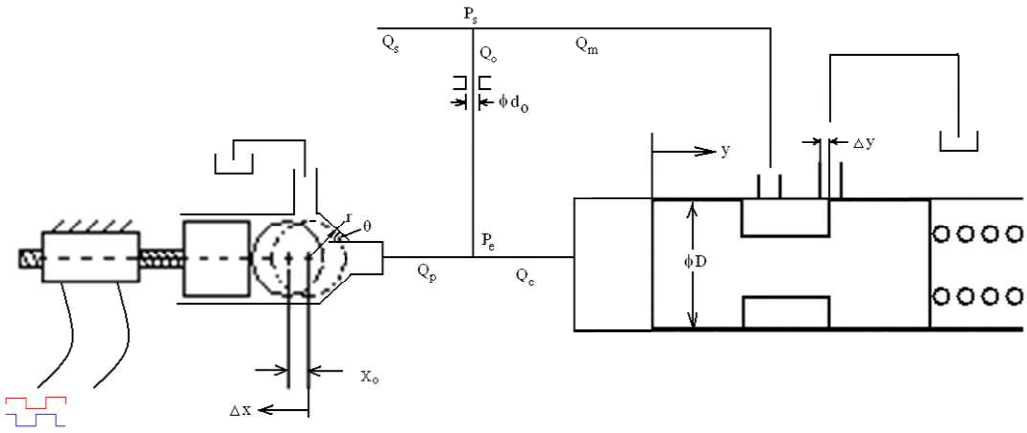


Figure 2: Schematic of digital proportional regulator valve

The supply flow, Q_s, is split into two flow paths Q_o and Q_m. Thus the equation for Q_s is:

$$Q_s = Q_o + Q_m \tag{1}$$

where Q_o is the flow through the orifice and is expressed:

$$Q_o = C_d A_o \sqrt{\frac{2(P_s - P_e)}{\rho}} \tag{2}$$

where C_d is the flow coefficient, A_o is the area of the orifice, P_s is the supply pressure, P_e is the control chamber pressure, and ρ is the fluid density.

Q_o is also split into two flows Q_p and Q_e, giving:

$$Q_o = Q_p + Q_e \tag{3}$$

Q_p is the flow past the check ball and is expressed in the dynamic state by:

$$Q_p = C_d \cdot A_p \cdot \sqrt{\frac{2P_e}{\rho}} - \pi \cdot r^2 \cdot \frac{dy}{dx} - \frac{V_e}{B_e} \cdot \frac{dP_e}{dt} \tag{4}$$

where A_p is the area of the check ball flow, r is the radius of the check ball, y is the distance the spool moves, x is the distance the check ball moves, V_e is the volume of the control chamber, B_e is the bulk modulus of the fluid, and t is time.

Q_p in the steady state condition is:

$$Q_p = C_d \cdot A_p \cdot \sqrt{\frac{2P_e}{\rho}} \tag{5}$$

Q_e is the flow to the control chamber and is present in the dynamic state as:

$$Q_e = \frac{\pi D^2}{4} \cdot \frac{dy}{dt} - \frac{V_e}{B_e} \cdot \frac{dP_e}{dt} \tag{6}$$

where D is the diameter of the spool.

Q_m is the flow across the spool and is expressed by:

$$Q_m = C_d \pi D(n\Delta y) \cdot \sqrt{\frac{2P_s}{\rho}} \tag{7}$$

where n is the step number and Δy has the relationship:

$$\Delta y = \frac{d_s}{\frac{x_o}{\Delta x}} \tag{9}$$

where d_s is the distance the spool travels, x_o is the distance the check ball moves, and Δx is the step size of the check ball.

Applying the equivalent circuit method to the system produces a relationship between the supply pressure and the control chamber pressure by using the voltage divider rule. Resistance terms will be pulled out of the orifice flow, Q_o, and the steady state Q_p flow equations. R_o is expressed as:

$$R_o = \frac{\sqrt{P_s - P_e}}{C_d A_o \sqrt{\frac{2}{\rho}}} \tag{9}$$

And R_p is expressed as:

$$R_p = \frac{\sqrt{P_e}}{C_d A_p \sqrt{\frac{2}{\rho}}} \tag{10}$$

The relationship between control chamber pressure, P_e, and supply pressure, P_s, is:

$$P_e = \frac{R_p}{R_p + R_o} \cdot P_s \tag{11}$$

The steady state P_e is defined as:

$$P_e = \frac{k(y_o + n\Delta y)}{\frac{\pi D^2}{4}} \tag{12}$$

where k is the spring constant and y_o is the spring preload.

After the manipulation of equation 11 and the substitution of equation 12, the equation for system pressure is presented as:

$$P_s = \frac{k(y_o + d_s)}{\frac{\pi D^2}{4}} + \frac{k(n\Delta y)}{\frac{\pi D^2}{4}} \quad (13)$$

3.2. Research Framework

This project provided a quantitative analysis of the digital step control of a proportional hydraulic regulator valve using a piezoelectric linear motor as an actuator. The theoretical approach proposed by Zhang and Haran (2009) is closely followed by this project. Most of the components of the digital proportional regulator valve were rapid prototyped using an Objet Eden 350 3D printer that used FullCure 720 plastic resin as a material. The finished product can be found in Figure 3. The check ball, snap rings, springs and hydraulic quick coupler fittings were all standard parts. Figure 4 shows the assembled digital proportional regulator valve along with pump and tank references.

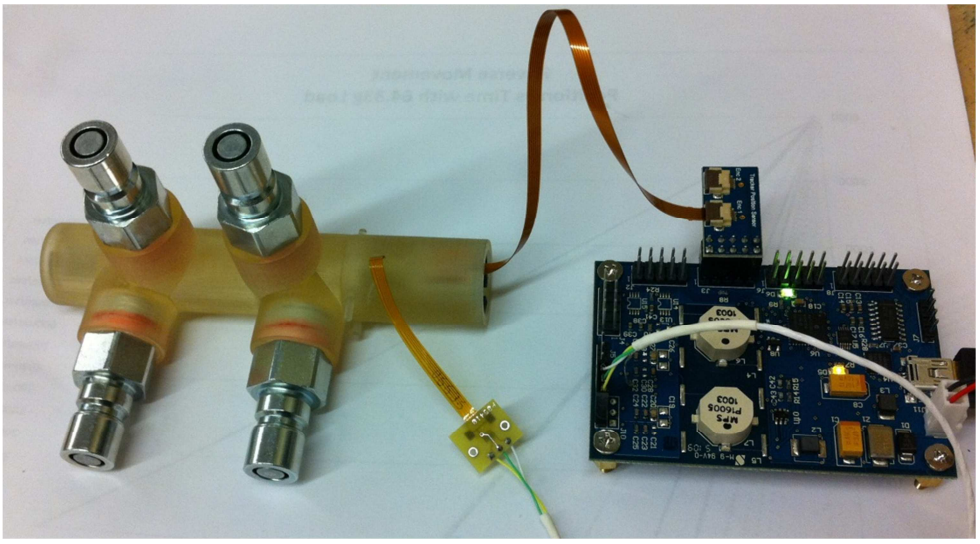


Figure 3: Rapid prototyped digital hydraulic valve

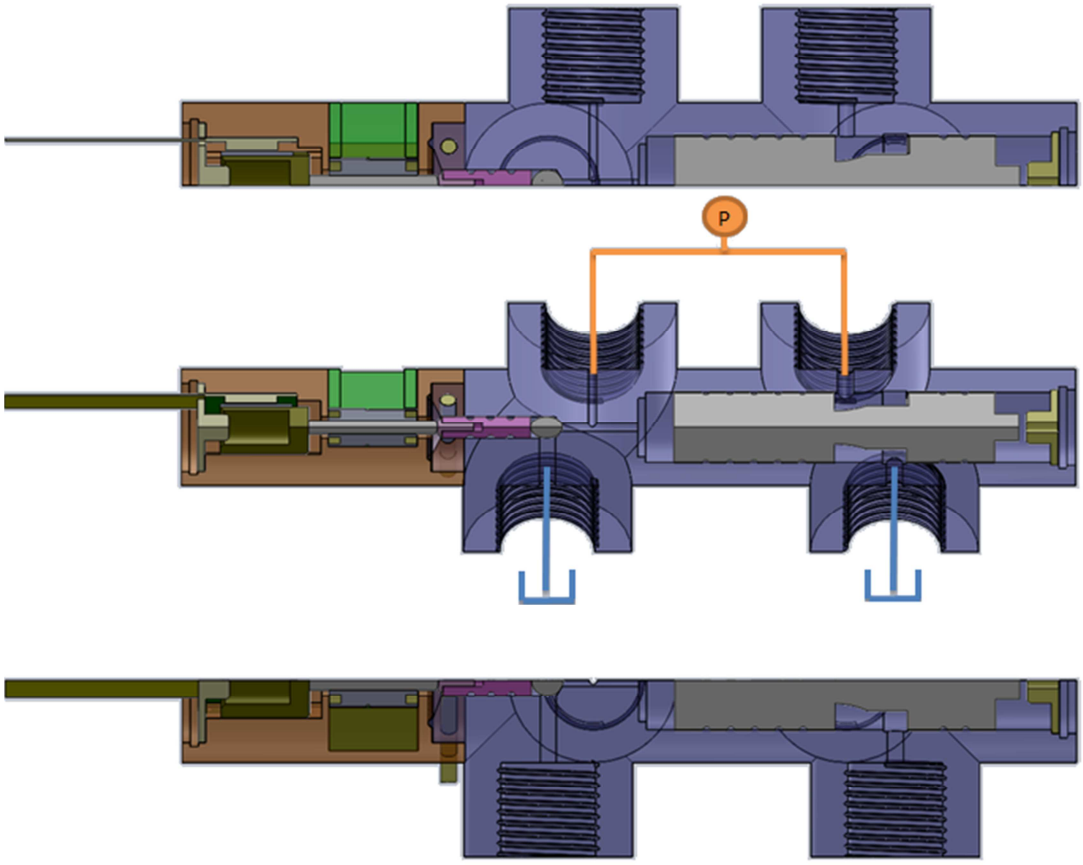


Figure 4: Digital proportional regulator valve

Initial tests of the piezoelectric motor were conducted to verify closed loop control motor operation characteristics under four loading conditions.

The valve was tested to see if the stepping of the motor resulted in pressure steps in the supply pressure. The motor was closed loop controlled by using a Tracker sensor. This sensor has the resolution of 0.5 µm to match the smallest step the linear piezoelectric motor can make. Line pressure was monitored with a pressure transducer and oil temperature was monitored with a K type thermocouple at the tank. The pressure transducer and thermocouple were wired to an SCB-68 LabView module. The position of the motor was plotted versus the line pressure, flow across the spool, and flow across the check

ball. The ideal relationship between line pressure and motor position would be linear, in a step like pattern, as shown in research done by Zhang and Haran (2009).

3.2.1. Equipment List

The following equipment was used in this study:

- Objet Eden 350 3D Printer
    - FullCure 720 Resin
- New Scale Technologies 3.4 Squiggle Motor
- New Scale Technologies MC1100 Controller
- New Scale Technologies Tracker Sensor
- LabView SCB-68 DAQ Module
- Computer with LabView and New Scale Pathway Software
- 100mL graduated cylinder
- 1000mL beaker
- Omega K-type thermocouple
- Omega 30psi differential pressure transducer
- Bosch Hydroaggregat D 821 002 097
    - 15W/40 Turbo HD 3CX oil
- Stopwatch

3.3. Testing Methodology

The piezoelectric motor was tested for velocity characteristics under four loading conditions using closed loop control in the New Scale Pathway software. Figure 5 shows the testing apparatus used to test the linear piezoelectric motor. The four loading conditions in order from load 1 to load 4 were as follows: a preload of 3.8 g, 64.33 g, 130.71 g, and 196.55 g respectively. For each load a distance of six millimeters was traveled at 12 different velocities. The velocity started at 100 µm/s and went to 1000 µm/s by increments of 100 µm/s; and then from 1000 µm/s to 4000 µm/s by increments of 1000 µm/s. The New Scale Pathway software recorded position and time every 0.1 seconds for each run.

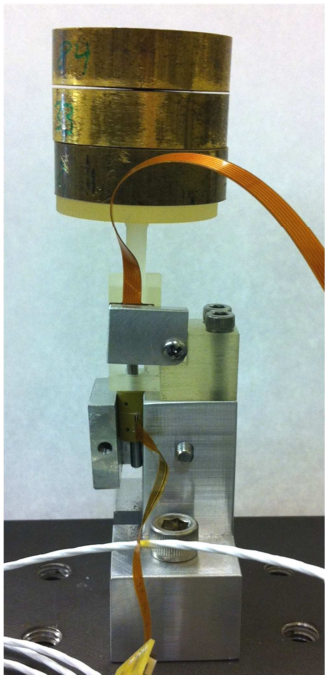


Figure 5: Linear motor testing apparatus.

A LabView program was constructed to monitor and record the line pressure of the hydraulic system, the temperature of the oil at the tank, as well as

the position of the linear piezoelectric motor. This program can be found in Figure A-2. The LabView program also controls the motor in open loop control and closed loop control settings. Three separate tests were run on the digital proportional valve. The first test was looking for pressure steps in the line pressure. In this test the LabView program controlled the motor by simply stepping the motor in 10 µm intervals from the closed check ball position to a distance of 320 µm where the check ball is in its opened position. The time interval between steps was 0.9 seconds. While the motor is running, pressure, position, and temperature data will be automatically captured in LabView.

The second and third tests were flow measurements across the spool and the check ball at every motor position from the first test. The LabView program was changed to hold the check ball position until a button was pushed to step the motor to the next position after the appropriate fluid was timed and recorded. Line pressure, temperature, and position were also recorded along with the flow measurements.

3.4. Data Analysis

The data recorded using New Scale Pathway software was exported to a spreadsheet to make the charts that describe the velocity characteristics under the four loading conditions. The relationship between position and time for every velocity curve should appear linear to satisfy the needs for the control of the proportional hydraulic regulator valve.

The data recorded using LabView was exported to a spreadsheet to make charts and graphs to describe the digital proportional valve's operation. The line pressure will be plotted against the position of the motor. The relationship displayed on the plot should appear linear. Linear regression will be used to determine an R^2 value for the data. The R^2 value should be close to 1, which would show that the incremental steps that the motor takes affect line pressure in a digital fashion. Line pressure will also be plotted versus time for each position. Flow across the spool and check ball will be plotted versus the motor position.

3.5. Summary

This section summarized the proposed methodology for the study to be conducted for this project. Additionally, it covered all associated values for the LabView program used to conduct the analysis.

SECTION 4. RESULTS

This section covers the results from the tests conducted on the linear piezoelectric motor and the digital proportional regulator valve.

4.1. Linear Piezoelectric Motor Results

Figure 6 through Figure 9 show the results from the four loading conditions at the various velocities.

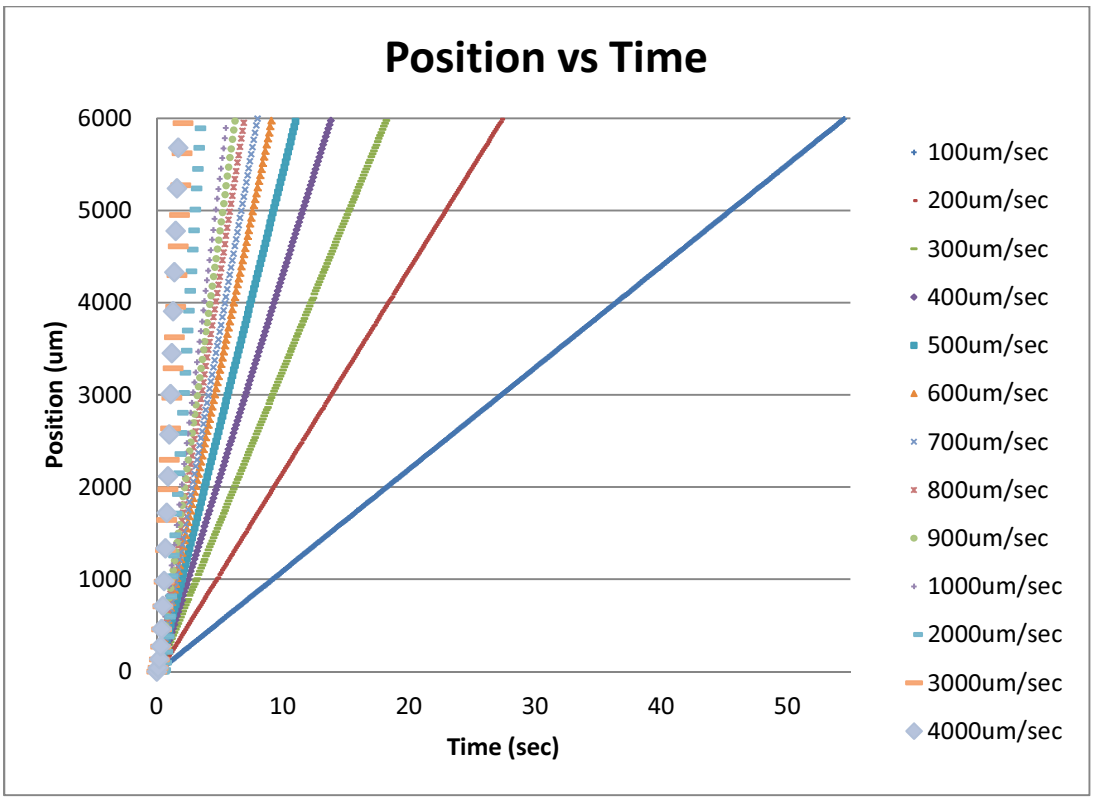


Figure 6: Velocity curves for 3.8 g load

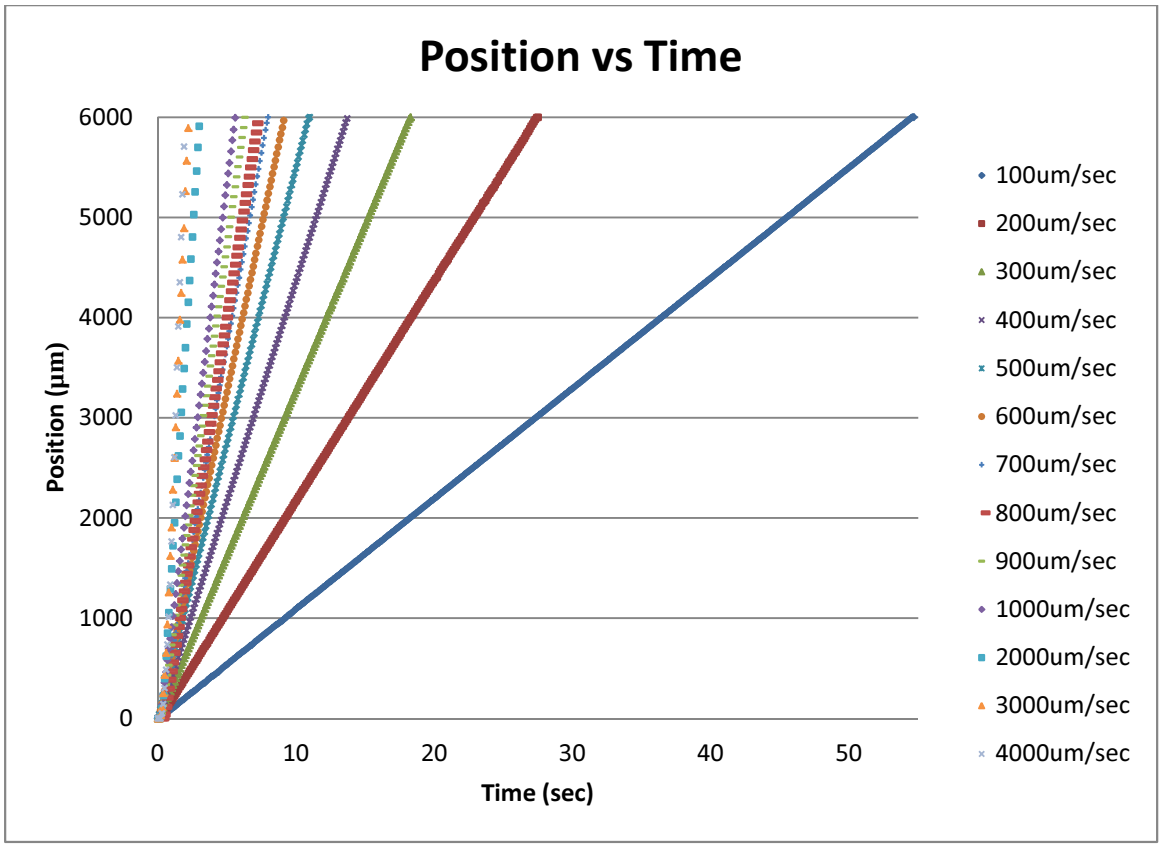


Figure 7: Velocity curves for 64.33 g load

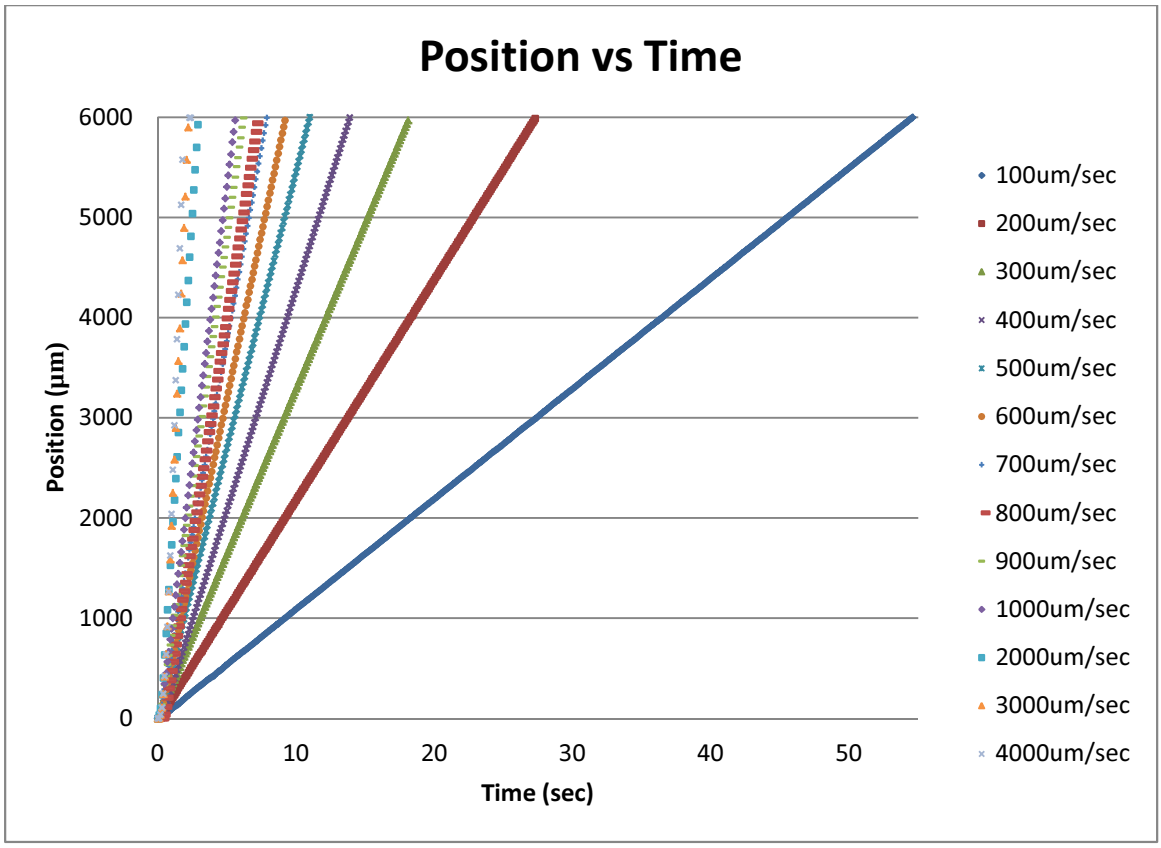


Figure 8: Velocity curves for 130.71 g load

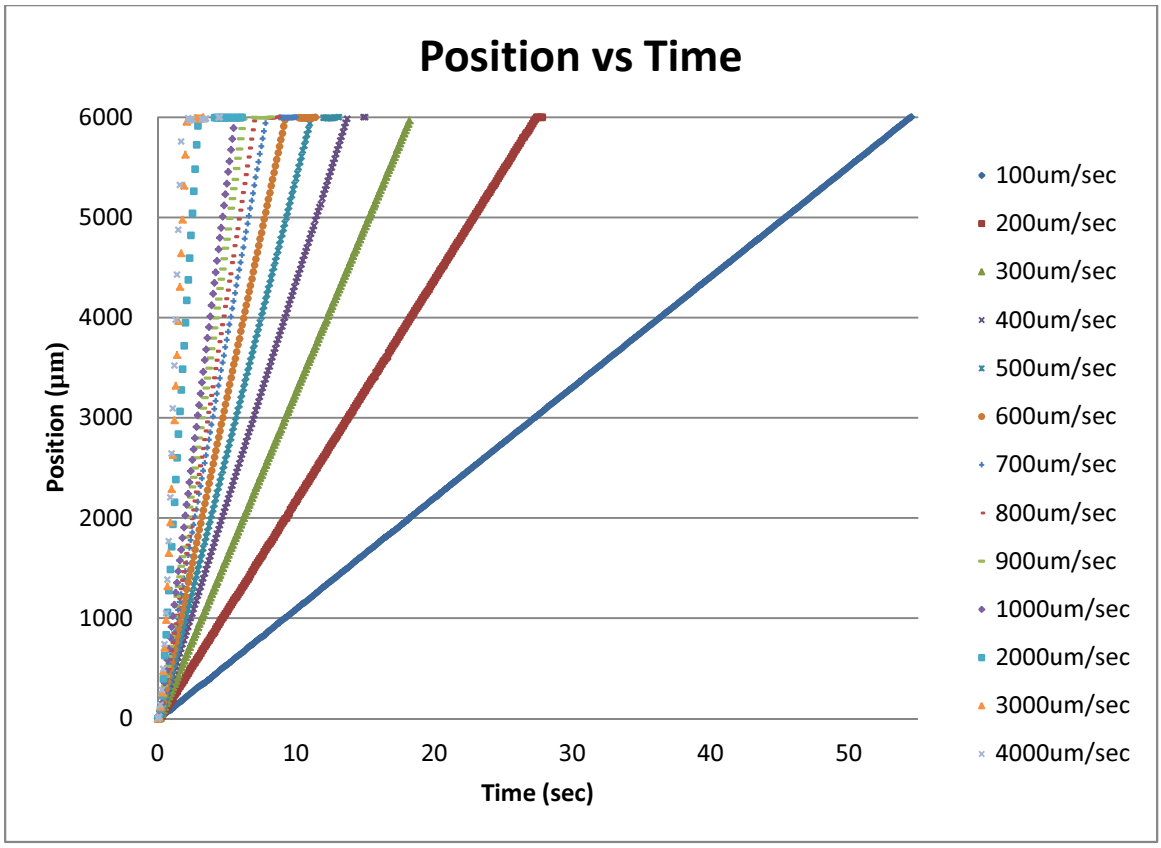
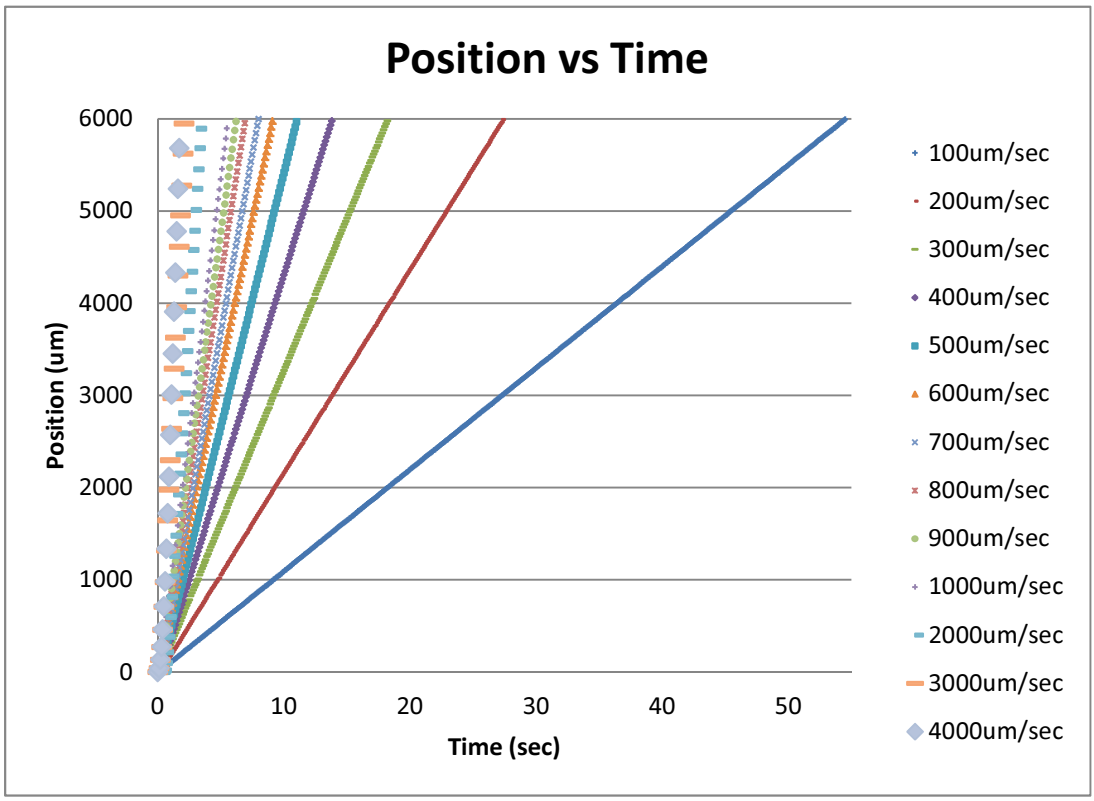


Figure 9: Velocity curves for 196.55 g load

It can be observed that the test results shown in Figure 6



through Figure 9 show linear velocity curves at all four of the loading conditions. This demonstrates that the closed loop control of the motor is capable of controlling the motor under loads up to 196.55 g, which is 98.3% of the motor's stall force. This test verifies that the linear piezoelectric motor is capable of controlling the check ball position and therefore the main spool. The data for these tests can be found in Table A-1.

4.2. Digital Proportional Hydraulic Regulator Valve Results

Figure 10 shows the pressure steps created by the linear piezoelectric motor. The zero micrometer position designates the position where the check ball is seated in the closed position, which means the main spool is in the open position. The zero position was found by stepping the check ball closed until the

flow across the check ball was observed to be zero. As the check ball position increases by 10 µm steps the main spool closes, causing the supply pressure to increase in digitized pressure steps. The data for Figure 10 can be found in Table A-2.

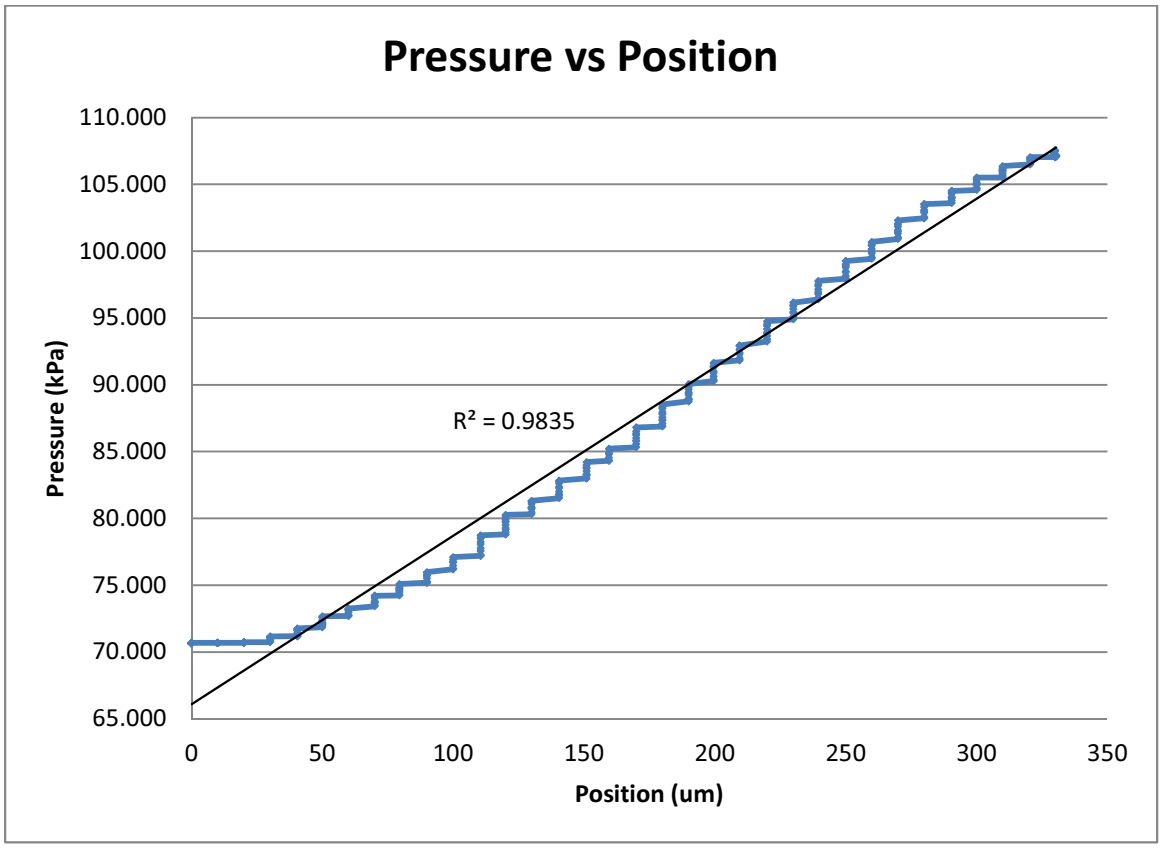


Figure 10: Pressure curve for digital valve

The first 30 µm the check ball travels there is very little, if any, pressure change. Figure 11 shows the linear pressure stepping portion of Figure 10 and the comparison of the calculated supply pressure curve with the linear portion of measured supply pressure. The linear trend line shows an R^2 value of 0.9928 for the linear portion and is an acceptable value to be considered linear. The temperature change from the zero position to the 330 µm position was 0.03 ℃. Thus, pressure change due to temperature was negligible.

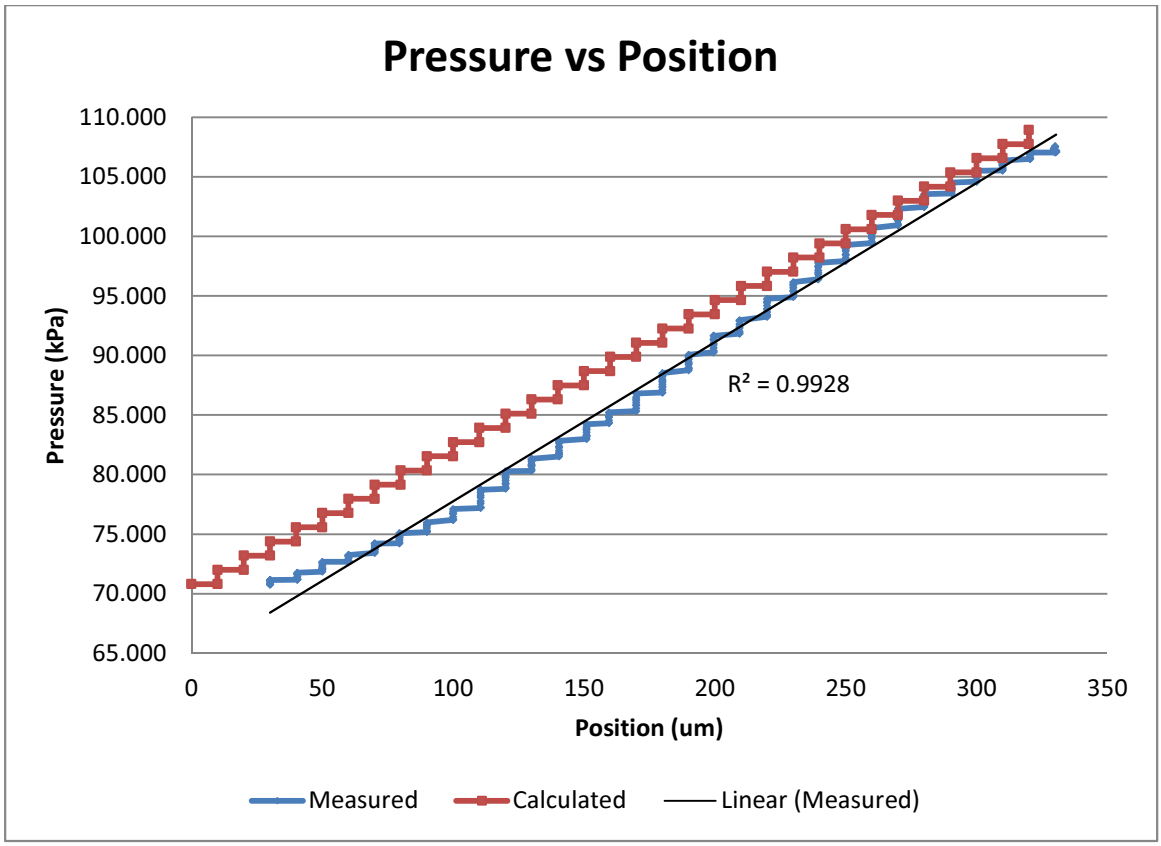


Figure 11: Comparison of calculated pressure with measured pressure

Figure 12 shows the pressure changes over time that vary with position of the check ball. This again shows the pressure stepping as the check ball opens.

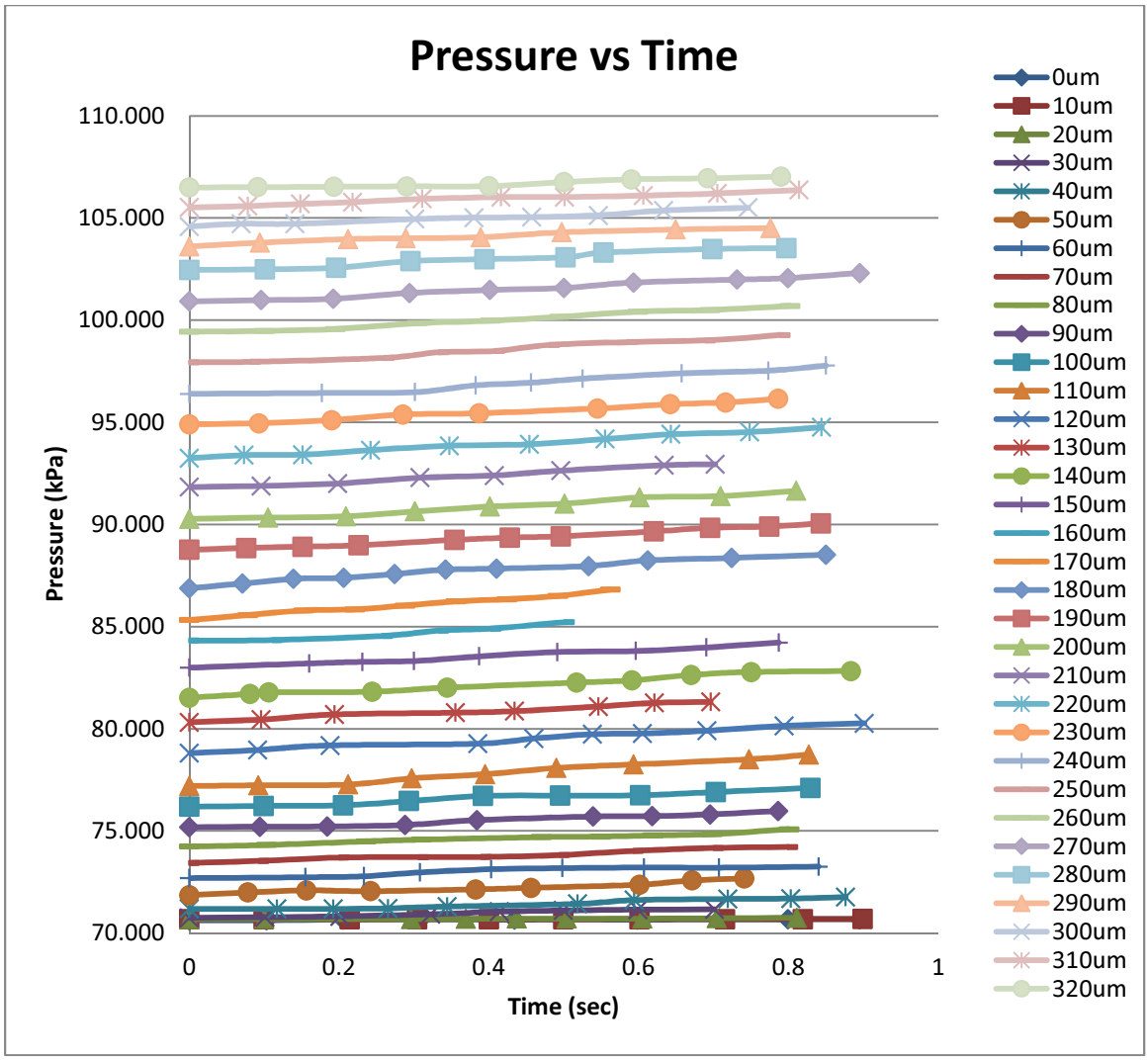


Figure 12: Pressure Curves for Check Ball Positions

Figure 13 shows the average flow measurements taken across the spool and the check ball at the 10 µm incremental positions. Viscosity changes due to changes in temperature of the oil affected the flow measurements. The flow curve presented crosses several theoretical flow curves for a given temperature. Ideally the oil temperature would need to be controlled to get flow data for a given temperature. The data for spool flow can be found in Table A-3 and the data for the check ball can be found in Table A-4.

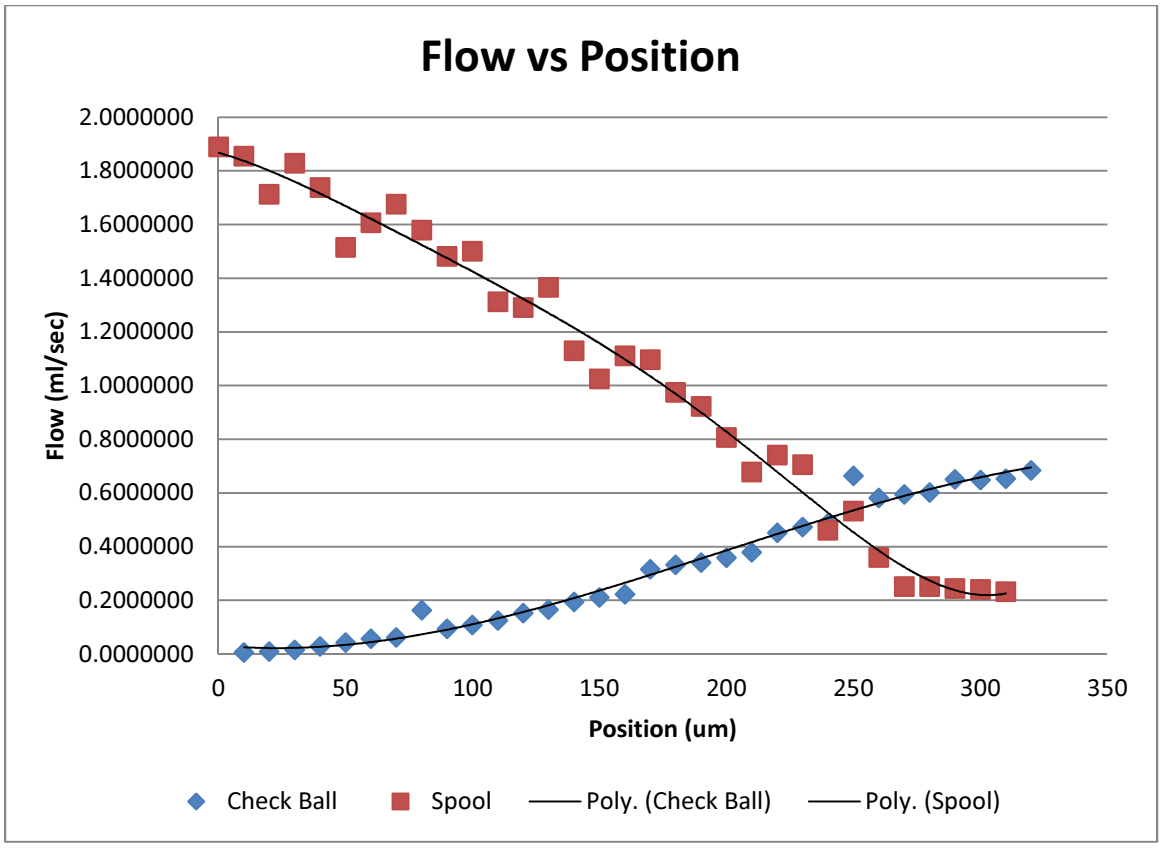


Figure 13: Digital Valve Flow Readings

4.3. Section Summary

This section summarized results from the tests conducted on the linear piezoelectric motor and the digital proportional regulator valve.

SECTION 5. CONCLUSIONS

This section covers the conclusions drawn from the digital proportional regulator valve results and the recommendations for future work.

5.1. Digital Proportional Hydraulic Regulator Valve

Electro-hydraulic devices are widely utilized in manufacturing industries and in various mobile machinery. In every application that utilizes electro-hydraulic equipment, it is desired that new systems be cheaper, more energy efficient, and have higher precision control. Therefore, it is necessary to pursue different approaches to control electro-hydraulic devices in order to better the industries that utilize them.

Based off the results of the digital proportional regulator valve, conclusions can be drawn to answer the question proposed for this research project. Upon review of Figure 10, it is observed that pressure steps do occur during 93% of the check ball travel. However, it is visually obvious that the pressure steps are not repeated in equal increments from check ball open to check ball close. Therefore, the rapid prototyped digital proportional regulator valve can be controlled with a linear piezoelectric motor; however the consistency between steps necessary to make this method suitable for industry applications is not

satisfied through rapid prototyping. The technology has been demonstrated and further research is necessary to create a valve with sufficient precision.

Despite the rapid prototyped digital proportional regulator valve not being able to repeat a digitized line pressure, the data does show that line pressure can be stepped with this method. Also, Figure 11 does show an R^2 value of 0.9928 and is enough proof to say that the pressure steps occur linearly. This is reason enough to believe that if the same valve tested in this research were made from a suitable steel, it could improve the results found in this study. Steel components would greatly increase the precision of the spools and bores and create sharp edges at the orifices. Steel components would also have higher hardness compared to the rapid prototyped plastic parts and therefore not deform at the check ball seat and where the check ball meets the spool that is controlled by the linear piezoelectric motor. Since these deformations can register on the micrometer scale, they affect the absolute positioning of the check ball and therefore affect the results.

Rapid prototyping the components in this project was a useful method for initial prototyping purposes. The rapid prototyped digital proportional regulator valve has shown proof of concept of the design. The next construction of this valve should be made out of precision machined metal components to better the results found in this study.

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APPENDIX

Table A-1. *Linear Piezoelectric Motor Data.*

Record	Accum Position (um)	Time (sec)	Velocity (um/sec)	Load (g)
9915	0.5	0	100	3.8
9916	1.5	0.1	100	3.8
9917	10.5	0.2	100	3.8
9918	20	0.3	100	3.8
9919	32	0.4	100	3.8
9920	44	0.5	100	3.8
9921	55.5	0.6	100	3.8
9922	66.5	0.7	100	3.8
9923	77.5	0.8	100	3.8
9924	88	0.9	100	3.8
9925	99	1	100	3.8
9926	110	1.1	100	3.8
9927	121.5	1.2	100	3.8
9928	132	1.3	100	3.8
9929	143	1.4	100	3.8
9930	153	1.5	100	3.8
9931	165	1.6	100	3.8
9932	177	1.7	100	3.8
9933	187	1.8	100	3.8
9934	197.5	1.9	100	3.8
9935	208.5	2	100	3.8
9936	220.5	2.1	100	3.8
9937	231.5	2.2	100	3.8
9938	241.5	2.3	100	3.8
9939	252	2.4	100	3.8
9940	261.5	2.5	100	3.8
9941	275	2.6	100	3.8
9942	285.5	2.7	100	3.8

9943	298	2.8	100	3.8
9944	308.5	2.9	100	3.8
9945	320	3	100	3.8
9946	331.5	3.1	100	3.8
9947	342	3.2	100	3.8
9948	351.5	3.3	100	3.8
9949	363.5	3.4	100	3.8
9950	373.5	3.5	100	3.8
9951	386	3.6	100	3.8
9952	397	3.7	100	3.8
9953	406.5	3.8	100	3.8
9954	418	3.9	100	3.8
9955	426.5	4	100	3.8
9956	439.5	4.1	100	3.8
9957	448.5	4.2	100	3.8
9958	461	4.3	100	3.8
9959	473.5	4.4	100	3.8
9960	483	4.5	100	3.8
9961	493	4.6	100	3.8
9962	505	4.7	100	3.8
9963	517	4.8	100	3.8
9964	529.5	4.9	100	3.8
9965	540	5	100	3.8
9966	551	5.1	100	3.8
9967	561.5	5.2	100	3.8
9968	574	5.3	100	3.8
9969	585	5.4	100	3.8
9970	594.5	5.5	100	3.8
9971	607	5.6	100	3.8
9972	619	5.7	100	3.8
9973	629	5.8	100	3.8
9974	639	5.9	100	3.8
9975	651	6	100	3.8
9976	660.5	6.1	100	3.8
9977	669.5	6.2	100	3.8
9978	683.5	6.3	100	3.8
9979	694.5	6.4	100	3.8
9980	705	6.5	100	3.8
9981	716	6.6	100	3.8
9982	726	6.7	100	3.8
9983	737.5	6.8	100	3.8
9984	749	6.9	100	3.8

9985	760	7	100	3.8
9986	771	7.1	100	3.8
9987	782.5	7.2	100	3.8
9988	793.5	7.3	100	3.8
9989	804	7.4	100	3.8
9990	815	7.5	100	3.8
9991	826.5	7.6	100	3.8
9992	837	7.7	100	3.8
9993	847	7.8	100	3.8
9994	861	7.9	100	3.8
9995	871	8	100	3.8
9996	881	8.1	100	3.8
9997	893	8.2	100	3.8
9998	902.5	8.3	100	3.8
9999	914.5	8.4	100	3.8
10000	925.5	8.5	100	3.8
10001	932	8.6	100	3.8
10002	945	8.7	100	3.8
10003	957.5	8.8	100	3.8
10004	967.5	8.9	100	3.8
10005	977	9	100	3.8
10006	990	9.1	100	3.8
10007	1001.5	9.2	100	3.8
10008	1010.5	9.3	100	3.8
10009	1022.5	9.4	100	3.8
10010	1034	9.5	100	3.8
10011	1044	9.6	100	3.8
10012	1052.5	9.7	100	3.8
10013	1065	9.8	100	3.8
10014	1081	9.9	100	3.8
10015	1089.5	10	100	3.8
10016	1102.5	10.1	100	3.8
10017	1110	10.2	100	3.8
10018	1123.5	10.3	100	3.8
10019	1134.5	10.4	100	3.8
10020	1146	10.5	100	3.8
10021	1157	10.6	100	3.8
10022	1168	10.7	100	3.8
10023	1179	10.8	100	3.8
10024	1190.5	10.9	100	3.8
10025	1202	11	100	3.8
10026	1214	11.1	100	3.8

10027	1225	11.2	100	3.8
10028	1236	11.3	100	3.8
10029	1246.5	11.4	100	3.8
10030	1257.5	11.5	100	3.8
10031	1269	11.6	100	3.8
10032	1280.5	11.7	100	3.8
10033	1290.5	11.8	100	3.8
10034	1301.5	11.9	100	3.8
10035	1312.5	12	100	3.8
10036	1324.5	12.1	100	3.8
10037	1336	12.2	100	3.8
10038	1346.5	12.3	100	3.8
10039	1358.5	12.4	100	3.8
10040	1368	12.5	100	3.8
10041	1377.5	12.6	100	3.8
10042	1391.5	12.7	100	3.8
10043	1400.5	12.8	100	3.8
10044	1410.5	12.9	100	3.8
10045	1421.5	13	100	3.8
10046	1434	13.1	100	3.8
10047	1445	13.2	100	3.8
10048	1456.5	13.3	100	3.8
10049	1467.5	13.4	100	3.8
10050	1478	13.5	100	3.8
10051	1489	13.6	100	3.8
10052	1500.5	13.7	100	3.8
10053	1512.5	13.8	100	3.8
10054	1523.5	13.9	100	3.8
10055	1535.5	14	100	3.8
10056	1545.5	14.1	100	3.8
10057	1556.5	14.2	100	3.8
10058	1567.5	14.3	100	3.8
10059	1578.5	14.4	100	3.8
10060	1589.5	14.5	100	3.8
10061	1599.5	14.6	100	3.8
10062	1611.5	14.7	100	3.8
10063	1621.5	14.8	100	3.8
10064	1632.5	14.9	100	3.8
10065	1641	15	100	3.8
10066	1652.5	15.1	100	3.8
10067	1665.5	15.2	100	3.8
10068	1674.5	15.3	100	3.8

10069	1687	15.4	100	3.8
10070	1697.5	15.5	100	3.8
10071	1709	15.6	100	3.8
10072	1720.5	15.7	100	3.8
10073	1732.5	15.8	100	3.8
10074	1744.5	15.9	100	3.8
10075	1752.5	16	100	3.8
10076	1761.5	16.1	100	3.8
10077	1773	16.2	100	3.8
10078	1787.5	16.3	100	3.8
10079	1799.5	16.4	100	3.8
10080	1809.5	16.5	100	3.8
10081	1820.5	16.6	100	3.8
10082	1831.5	16.7	100	3.8
10083	1842	16.8	100	3.8
10084	1854	16.9	100	3.8
10085	1863.5	17	100	3.8
10086	1873.5	17.1	100	3.8
10087	1886	17.2	100	3.8
10088	1896.5	17.3	100	3.8
10089	1907	17.4	100	3.8
10090	1918.5	17.5	100	3.8
10091	1928.5	17.6	100	3.8
10092	1941.5	17.7	100	3.8
10093	1952	17.8	100	3.8
10094	1962.5	17.9	100	3.8
10095	1973.5	18	100	3.8
10096	1985	18.1	100	3.8
10097	1996	18.2	100	3.8
10098	2004.5	18.3	100	3.8
10099	2018	18.4	100	3.8
10100	2029.5	18.5	100	3.8
10101	2041.5	18.6	100	3.8
10102	2051.5	18.7	100	3.8
10103	2064.5	18.8	100	3.8
10104	2074	18.9	100	3.8
10105	2085.5	19	100	3.8
10106	2094.5	19.1	100	3.8
10107	2106.5	19.2	100	3.8
10108	2118.5	19.3	100	3.8
10109	2129	19.4	100	3.8
10110	2139.5	19.5	100	3.8

10111	2150	19.6	100	3.8
10112	2159	19.7	100	3.8
10113	2170.5	19.8	100	3.8
10114	2182	19.9	100	3.8
10115	2194	20	100	3.8
10116	2206	20.1	100	3.8
10117	2216	20.2	100	3.8
10118	2228	20.3	100	3.8
10119	2237.5	20.4	100	3.8
10120	2249	20.5	100	3.8
10121	2259.5	20.6	100	3.8
10122	2271.5	20.7	100	3.8
10123	2282.5	20.8	100	3.8
10124	2293	20.9	100	3.8
10125	2305	21	100	3.8
10126	2316.5	21.1	100	3.8
10127	2327.5	21.2	100	3.8
10128	2338.5	21.3	100	3.8
10129	2349.5	21.4	100	3.8
10130	2360.5	21.5	100	3.8
10131	2371	21.6	100	3.8
10132	2381	21.7	100	3.8
10133	2392	21.8	100	3.8
10134	2403.5	21.9	100	3.8
10135	2413.5	22	100	3.8
10136	2424.5	22.1	100	3.8
10137	2435.5	22.2	100	3.8
10138	2447.5	22.3	100	3.8
10139	2459.5	22.4	100	3.8
10140	2469.5	22.5	100	3.8
10141	2480	22.6	100	3.8
10142	2491	22.7	100	3.8
10143	2504	22.8	100	3.8
10144	2512.5	22.9	100	3.8
10145	2519	23	100	3.8
10146	2535	23.1	100	3.8
10147	2547.5	23.2	100	3.8
10148	2559.5	23.3	100	3.8
10149	2569	23.4	100	3.8
10150	2580	23.5	100	3.8
10151	2590	23.6	100	3.8
10152	2601.5	23.7	100	3.8

10153	2613.5	23.8	100	3.8
10154	2624.5	23.9	100	3.8
10155	2636.5	24	100	3.8
10156	2647	24.1	100	3.8
10157	2657	24.2	100	3.8
10158	2668	24.3	100	3.8
10159	2678.5	24.4	100	3.8
10160	2690	24.5	100	3.8
10161	2700.5	24.6	100	3.8
10162	2712	24.7	100	3.8
10163	2722.5	24.8	100	3.8
10164	2735.5	24.9	100	3.8
10165	2746	25	100	3.8
10166	2756.5	25.1	100	3.8
10167	2767.5	25.2	100	3.8
10168	2778.5	25.3	100	3.8
10169	2790.5	25.4	100	3.8
10170	2801	25.5	100	3.8
10171	2812.5	25.6	100	3.8
10172	2823.5	25.7	100	3.8
10173	2834	25.8	100	3.8
10174	2845	25.9	100	3.8
10175	2856.5	26	100	3.8
10176	2867	26.1	100	3.8
10177	2876.5	26.2	100	3.8
10178	2886.5	26.3	100	3.8
10179	2897.5	26.4	100	3.8
10180	2905.5	26.5	100	3.8
10181	2917.5	26.6	100	3.8
10182	2933.5	26.7	100	3.8
10183	2942	26.8	100	3.8
10184	2954	26.9	100	3.8
10185	2965	27	100	3.8
10186	2976.5	27.1	100	3.8
10187	2988.5	27.2	100	3.8
10188	2999	27.3	100	3.8
10189	3009.5	27.4	100	3.8
10190	3022	27.5	100	3.8
10191	3032.5	27.6	100	3.8
10192	3043.5	27.7	100	3.8
10193	3054.5	27.8	100	3.8
10194	3065.5	27.9	100	3.8

10195	3075	28	100	3.8
10196	3087	28.1	100	3.8
10197	3097	28.2	100	3.8
10198	3109.5	28.3	100	3.8
10199	3121.5	28.4	100	3.8
10200	3131.5	28.5	100	3.8
10201	3142	28.6	100	3.8
10202	3152.5	28.7	100	3.8
10203	3165	28.8	100	3.8
10204	3175.5	28.9	100	3.8
10205	3186	29	100	3.8
10206	3197.5	29.1	100	3.8
10207	3208	29.2	100	3.8
10208	3219.5	29.3	100	3.8
10209	3230.5	29.4	100	3.8
10210	3240.5	29.5	100	3.8
10211	3250.5	29.6	100	3.8
10212	3262	29.7	100	3.8
10213	3273.5	29.8	100	3.8
10214	3284.5	29.9	100	3.8
10215	3297.5	30	100	3.8
10216	3308.5	30.1	100	3.8
10217	3319.5	30.2	100	3.8
10218	3330.5	30.3	100	3.8
10219	3340.5	30.4	100	3.8
10220	3351.5	30.5	100	3.8
10221	3362.5	30.6	100	3.8
10222	3373	30.7	100	3.8
10223	3384.5	30.8	100	3.8
10224	3395.5	30.9	100	3.8
10225	3407	31	100	3.8
10226	3416.5	31.1	100	3.8
10227	3428.5	31.2	100	3.8
10228	3439	31.3	100	3.8
10229	3449.5	31.4	100	3.8
10230	3461	31.5	100	3.8
10231	3472	31.6	100	3.8
10232	3482.5	31.7	100	3.8
10233	3494.5	31.8	100	3.8
10234	3504	31.9	100	3.8
10235	3517.5	32	100	3.8
10236	3528.5	32.1	100	3.8

10237	3539	32.2	100	3.8
10238	3550	32.3	100	3.8
10239	3561	32.4	100	3.8
10240	3572	32.5	100	3.8
10241	3582	32.6	100	3.8
10242	3593	32.7	100	3.8
10243	3604.5	32.8	100	3.8
10244	3615.5	32.9	100	3.8
10245	3627	33	100	3.8
10246	3638	33.1	100	3.8
10247	3648.5	33.2	100	3.8
10248	3660	33.3	100	3.8
10249	3670	33.4	100	3.8
10250	3680.5	33.5	100	3.8
10251	3692.5	33.6	100	3.8
10252	3702	33.7	100	3.8
10253	3715.5	33.8	100	3.8
10254	3725	33.9	100	3.8
10255	3737	34	100	3.8
10256	3748.5	34.1	100	3.8
10257	3759.5	34.2	100	3.8
10258	3770	34.3	100	3.8
10259	3780.5	34.4	100	3.8
10260	3792	34.5	100	3.8
10261	3803	34.6	100	3.8
10262	3812.5	34.7	100	3.8
10263	3822	34.8	100	3.8
10264	3835.5	34.9	100	3.8
10265	3845.5	35	100	3.8
10266	3857.5	35.1	100	3.8
10267	3868	35.2	100	3.8
10268	3881	35.3	100	3.8
10269	3891.5	35.4	100	3.8
10270	3902	35.5	100	3.8
10271	3913	35.6	100	3.8
10272	3924	35.7	100	3.8
10273	3935	35.8	100	3.8
10274	3946.5	35.9	100	3.8
10275	3956.5	36	100	3.8
10276	3967.5	36.1	100	3.8
10277	3980	36.2	100	3.8
10278	3989	36.3	100	3.8

10279	4001.5	36.4	100	3.8
10280	4013	36.5	100	3.8
10281	4023	36.6	100	3.8
10282	4033.5	36.7	100	3.8
10283	4046	36.8	100	3.8
10284	4056.5	36.9	100	3.8
10285	4067.5	37	100	3.8
10286	4078	37.1	100	3.8
10287	4086.5	37.2	100	3.8
10288	4094.5	37.3	100	3.8
10289	4105.5	37.4	100	3.8
10290	4119	37.5	100	3.8
10291	4128.5	37.6	100	3.8
10292	4144	37.7	100	3.8
10293	4153.5	37.8	100	3.8
10294	4166	37.9	100	3.8
10295	4176	38	100	3.8
10296	4188	38.1	100	3.8
10297	4198	38.2	100	3.8
10298	4210.5	38.3	100	3.8
10299	4222.5	38.4	100	3.8
10300	4232	38.5	100	3.8
10301	4243	38.6	100	3.8
10302	4255.5	38.7	100	3.8
10303	4265.5	38.8	100	3.8
10304	4277.5	38.9	100	3.8
10305	4287.5	39	100	3.8
10306	4299	39.1	100	3.8
10307	4309.5	39.2	100	3.8
10308	4321.5	39.3	100	3.8
10309	4332	39.4	100	3.8
10310	4342	39.5	100	3.8
10311	4354	39.6	100	3.8
10312	4365	39.7	100	3.8
10313	4376.5	39.8	100	3.8
10314	4384.5	39.9	100	3.8
10315	4397.5	40	100	3.8
10316	4408	40.1	100	3.8
10317	4418	40.2	100	3.8
10318	4430.5	40.3	100	3.8
10319	4440	40.4	100	3.8
10320	4451.5	40.5	100	3.8

10321	4462	40.6	100	3.8
10322	4475.5	40.7	100	3.8
10323	4485	40.8	100	3.8
10324	4498	40.9	100	3.8
10325	4508	41	100	3.8
10326	4519.5	41.1	100	3.8
10327	4530	41.2	100	3.8
10328	4542	41.3	100	3.8
10329	4552.5	41.4	100	3.8
10330	4563	41.5	100	3.8
10331	4574	41.6	100	3.8
10332	4585	41.7	100	3.8
10333	4595	41.8	100	3.8
10334	4607	41.9	100	3.8
10335	4617.5	42	100	3.8
10336	4629	42.1	100	3.8
10337	4639.5	42.2	100	3.8
10338	4651	42.3	100	3.8
10339	4661	42.4	100	3.8
10340	4673.5	42.5	100	3.8
10341	4684	42.6	100	3.8
10342	4695	42.7	100	3.8
10343	4707	42.8	100	3.8
10344	4716.5	42.9	100	3.8
10345	4728.5	43	100	3.8
10346	4740	43.1	100	3.8
10347	4751	43.2	100	3.8
10348	4761.5	43.3	100	3.8
10349	4772.5	43.4	100	3.8
10350	4784	43.5	100	3.8
10351	4795	43.6	100	3.8
10352	4806	43.7	100	3.8
10353	4816	43.8	100	3.8
10354	4827.5	43.9	100	3.8
10355	4836.5	44	100	3.8
10356	4849	44.1	100	3.8
10357	4861	44.2	100	3.8
10358	4872	44.3	100	3.8
10359	4882	44.4	100	3.8
10360	4894	44.5	100	3.8
10361	4903.5	44.6	100	3.8
10362	4915	44.7	100	3.8

10363	4925.5	44.8	100	3.8
10364	4937.5	44.9	100	3.8
10365	4948.5	45	100	3.8
10366	4957	45.1	100	3.8
10367	4970	45.2	100	3.8
10368	4982	45.3	100	3.8
10369	4993	45.4	100	3.8
10370	5004	45.5	100	3.8
10371	5015.5	45.6	100	3.8
10372	5026	45.7	100	3.8
10373	5036.5	45.8	100	3.8
10374	5048	45.9	100	3.8
10375	5059.5	46	100	3.8
10376	5070	46.1	100	3.8
10377	5079.5	46.2	100	3.8
10378	5092	46.3	100	3.8
10379	5102	46.4	100	3.8
10380	5113.5	46.5	100	3.8
10381	5124	46.6	100	3.8
10382	5135.5	46.7	100	3.8
10383	5146	46.8	100	3.8
10384	5158	46.9	100	3.8
10385	5168	47	100	3.8
10386	5178.5	47.1	100	3.8
10387	5189	47.2	100	3.8
10388	5202.5	47.3	100	3.8
10389	5213.5	47.4	100	3.8
10390	5225	47.5	100	3.8
10391	5236	47.6	100	3.8
10392	5247.5	47.7	100	3.8
10393	5257.5	47.8	100	3.8
10394	5269	47.9	100	3.8
10395	5280	48	100	3.8
10396	5290	48.1	100	3.8
10397	5301.5	48.2	100	3.8
10398	5311	48.3	100	3.8
10399	5322	48.4	100	3.8
10400	5334	48.5	100	3.8
10401	5345	48.6	100	3.8
10402	5355	48.7	100	3.8
10403	5367.5	48.8	100	3.8
10404	5377.5	48.9	100	3.8

10405	5389	49	100	3.8
10406	5400.5	49.1	100	3.8
10407	5411	49.2	100	3.8
10408	5419	49.3	100	3.8
10409	5433.5	49.4	100	3.8
10410	5444	49.5	100	3.8
10411	5455	49.6	100	3.8
10412	5466.5	49.7	100	3.8
10413	5477	49.8	100	3.8
10414	5488.5	49.9	100	3.8
10415	5500.5	50	100	3.8
10416	5511	50.1	100	3.8
10417	5521.5	50.2	100	3.8
10418	5532	50.3	100	3.8
10419	5544.5	50.4	100	3.8
10420	5555	50.5	100	3.8
10421	5565.5	50.6	100	3.8
10422	5575.5	50.7	100	3.8
10423	5588.5	50.8	100	3.8
10424	5598.5	50.9	100	3.8
10425	5609.5	51	100	3.8
10426	5619.5	51.1	100	3.8
10427	5630	51.2	100	3.8
10428	5641.5	51.3	100	3.8
10429	5653	51.4	100	3.8
10430	5662.5	51.5	100	3.8
10431	5676.5	51.6	100	3.8
10432	5686.5	51.7	100	3.8
10433	5698	51.8	100	3.8
10434	5708	51.9	100	3.8
10435	5721	52	100	3.8
10436	5731	52.1	100	3.8
10437	5741	52.2	100	3.8
10438	5753	52.3	100	3.8
10439	5767.5	52.4	100	3.8
10440	5774	52.5	100	3.8
10441	5786	52.6	100	3.8
10442	5797	52.7	100	3.8
10443	5808.5	52.8	100	3.8
10444	5819	52.9	100	3.8
10445	5829.5	53	100	3.8
10446	5841	53.1	100	3.8

10447	5851.5	53.2	100	3.8
10448	5862.5	53.3	100	3.8
10449	5873	53.4	100	3.8
10450	5883	53.5	100	3.8
10451	5895.5	53.6	100	3.8
10452	5905	53.7	100	3.8
10453	5916.5	53.8	100	3.8
10454	5929	53.9	100	3.8
10455	5939.5	54	100	3.8
10456	5951	54.1	100	3.8
10457	5961.5	54.2	100	3.8
10458	5970.5	54.3	100	3.8
10459	5984.5	54.4	100	3.8
10460	5994.5	54.5	100	3.8
10461	6001	54.6	100	3.8
11044	0.5	0	200	3.8
11045	1	0.1	200	3.8
11046	18.5	0.2	200	3.8
11047	40.5	0.3	200	3.8
11048	64	0.4	200	3.8
11049	86.5	0.5	200	3.8
11050	108.5	0.6	200	3.8
11051	129	0.7	200	3.8
11052	151.5	0.8	200	3.8
11053	173.5	0.9	200	3.8
11054	195	1	200	3.8
11055	217	1.1	200	3.8
11056	238.5	1.2	200	3.8
11057	260	1.3	200	3.8
11058	282	1.4	200	3.8
11059	305	1.5	200	3.8
11060	323.5	1.6	200	3.8
11061	348	1.7	200	3.8
11062	371	1.8	200	3.8
11063	395	1.9	200	3.8
11064	415	2	200	3.8
11065	435.5	2.1	200	3.8
11066	456	2.2	200	3.8
11067	480.5	2.3	200	3.8
11068	502	2.4	200	3.8
11069	525.5	2.5	200	3.8
11070	548	2.6	200	3.8

11071	572	2.7	200	3.8
11072	593	2.8	200	3.8
11073	614.5	2.9	200	3.8
11074	637.5	3	200	3.8
11075	659	3.1	200	3.8
11076	682	3.2	200	3.8
11077	701	3.3	200	3.8
11078	723	3.4	200	3.8
11079	745.5	3.5	200	3.8
11080	768	3.6	200	3.8
11081	790.5	3.7	200	3.8
11082	811.5	3.8	200	3.8
11083	836	3.9	200	3.8
11084	858.5	4	200	3.8
11085	879	4.1	200	3.8
11086	902.5	4.2	200	3.8
11087	921.5	4.3	200	3.8
11088	939.5	4.4	200	3.8
11089	965	4.5	200	3.8
11090	981.5	4.6	200	3.8
11091	1007	4.7	200	3.8
11092	1016.5	4.8	200	3.8
11093	1051	4.9	200	3.8
11094	1074	5	200	3.8
11095	1100	5.1	200	3.8
11096	1120.5	5.2	200	3.8
11097	1141.5	5.3	200	3.8
11098	1162.5	5.4	200	3.8
11099	1188	5.5	200	3.8
11100	1205.5	5.6	200	3.8
11101	1227.5	5.7	200	3.8
11102	1252	5.8	200	3.8
11103	1272	5.9	200	3.8
11104	1296.5	6	200	3.8
11105	1320.5	6.1	200	3.8
11106	1343	6.2	200	3.8
11107	1365.5	6.3	200	3.8
11108	1386.5	6.4	200	3.8
11109	1407	6.5	200	3.8
11110	1428.5	6.6	200	3.8
11111	1452.5	6.7	200	3.8
11112	1474	6.8	200	3.8

11113	1496	6.9	200	3.8
11114	1514	7	200	3.8
11115	1540.5	7.1	200	3.8
11116	1562.5	7.2	200	3.8
11117	1586	7.3	200	3.8
11118	1606	7.4	200	3.8
11119	1629	7.5	200	3.8
11120	1651	7.6	200	3.8
11121	1673.5	7.7	200	3.8
11122	1697	7.8	200	3.8
11123	1716.5	7.9	200	3.8
11124	1737.5	8	200	3.8
11125	1763	8.1	200	3.8
11126	1784	8.2	200	3.8
11127	1805.5	8.3	200	3.8
11128	1828	8.4	200	3.8
11129	1850	8.5	200	3.8
11130	1873	8.6	200	3.8
11131	1894.5	8.7	200	3.8
11132	1916	8.8	200	3.8
11133	1936.5	8.9	200	3.8
11134	1961	9	200	3.8
11135	1981.5	9.1	200	3.8
11136	2005	9.2	200	3.8
11137	2027	9.3	200	3.8
11138	2048	9.4	200	3.8
11139	2070.5	9.5	200	3.8
11140	2091.5	9.6	200	3.8
11141	2112	9.7	200	3.8
11142	2134	9.8	200	3.8
11143	2157	9.9	200	3.8
11144	2179.5	10	200	3.8
11145	2202.5	10.1	200	3.8
11146	2226	10.2	200	3.8
11147	2246.5	10.3	200	3.8
11148	2270.5	10.4	200	3.8
11149	2291	10.5	200	3.8
11150	2312.5	10.6	200	3.8
11151	2333	10.7	200	3.8
11152	2356	10.8	200	3.8
11153	2377.5	10.9	200	3.8
11154	2400.5	11	200	3.8

11155	2421	11.1	200	3.8
11156	2444.5	11.2	200	3.8
11157	2462.5	11.3	200	3.8
11158	2483	11.4	200	3.8
11159	2512	11.5	200	3.8
11160	2531.5	11.6	200	3.8
11161	2554	11.7	200	3.8
11162	2576.5	11.8	200	3.8
11163	2597	11.9	200	3.8
11164	2622	12	200	3.8
11165	2643	12.1	200	3.8
11166	2664	12.2	200	3.8
11167	2688.5	12.3	200	3.8
11168	2709	12.4	200	3.8
11169	2731.5	12.5	200	3.8
11170	2753.5	12.6	200	3.8
11171	2775.5	12.7	200	3.8
11172	2797.5	12.8	200	3.8
11173	2818.5	12.9	200	3.8
11174	2839	13	200	3.8
11175	2853	13.1	200	3.8
11176	2881.5	13.2	200	3.8
11177	2907	13.3	200	3.8
11178	2930	13.4	200	3.8
11179	2951	13.5	200	3.8
11180	2974	13.6	200	3.8
11181	2995.5	13.7	200	3.8
11182	3019	13.8	200	3.8
11183	3039	13.9	200	3.8
11184	3059.5	14	200	3.8
11185	3083	14.1	200	3.8
11186	3104.5	14.2	200	3.8
11187	3128	14.3	200	3.8
11188	3149	14.4	200	3.8
11189	3172	14.5	200	3.8
11190	3193	14.6	200	3.8
11191	3213.5	14.7	200	3.8
11192	3237.5	14.8	200	3.8
11193	3260.5	14.9	200	3.8
11194	3282	15	200	3.8
11195	3302.5	15.1	200	3.8
11196	3324.5	15.2	200	3.8

11197	3346.5	15.3	200	3.8
11198	3367	15.4	200	3.8
11199	3391	15.5	200	3.8
11200	3413	15.6	200	3.8
11201	3435	15.7	200	3.8
11202	3458	15.8	200	3.8
11203	3481	15.9	200	3.8
11204	3503	16	200	3.8
11205	3523	16.1	200	3.8
11206	3544	16.2	200	3.8
11207	3566	16.3	200	3.8
11208	3590.5	16.4	200	3.8
11209	3611	16.5	200	3.8
11210	3634	16.6	200	3.8
11211	3655.5	16.7	200	3.8
11212	3677	16.8	200	3.8
11213	3700	16.9	200	3.8
11214	3722	17	200	3.8
11215	3743	17.1	200	3.8
11216	3760	17.2	200	3.8
11217	3787	17.3	200	3.8
11218	3810	17.4	200	3.8
11219	3832	17.5	200	3.8
11220	3855	17.6	200	3.8
11221	3876	17.7	200	3.8
11222	3899.5	17.8	200	3.8
11223	3919	17.9	200	3.8
11224	3942.5	18	200	3.8
11225	3964	18.1	200	3.8
11226	3986.5	18.2	200	3.8
11227	4009	18.3	200	3.8
11228	4031	18.4	200	3.8
11229	4048	18.5	200	3.8
11230	4065	18.6	200	3.8
11231	4095.5	18.7	200	3.8
11232	4119	18.8	200	3.8
11233	4140	18.9	200	3.8
11234	4163	19	200	3.8
11235	4185.5	19.1	200	3.8
11236	4206.5	19.2	200	3.8
11237	4229	19.3	200	3.8
11238	4252	19.4	200	3.8

11239	4274	19.5	200	3.8
11240	4295	19.6	200	3.8
11241	4316	19.7	200	3.8
11242	4339.5	19.8	200	3.8
11243	4361	19.9	200	3.8
11244	4384	20	200	3.8
11245	4404	20.1	200	3.8
11246	4426.5	20.2	200	3.8
11247	4449.5	20.3	200	3.8
11248	4469.5	20.4	200	3.8
11249	4492	20.5	200	3.8
11250	4515	20.6	200	3.8
11251	4537.5	20.7	200	3.8
11252	4560	20.8	200	3.8
11253	4581	20.9	200	3.8
11254	4603	21	200	3.8
11255	4624	21.1	200	3.8
11256	4647	21.2	200	3.8
11257	4669	21.3	200	3.8
11258	4688.5	21.4	200	3.8
11259	4713.5	21.5	200	3.8
11260	4735.5	21.6	200	3.8
11261	4755	21.7	200	3.8
11262	4778.5	21.8	200	3.8
11263	4803	21.9	200	3.8
11264	4824.5	22	200	3.8
11265	4844.5	22.1	200	3.8
11266	4868	22.2	200	3.8
11267	4890	22.3	200	3.8
11268	4912.5	22.4	200	3.8
11269	4932.5	22.5	200	3.8
11270	4953.5	22.6	200	3.8
11271	4975.5	22.7	200	3.8
11272	4996	22.8	200	3.8
11273	5020	22.9	200	3.8
11274	5043.5	23	200	3.8
11275	5065	23.1	200	3.8
11276	5087.5	23.2	200	3.8
11277	5109.5	23.3	200	3.8
11278	5131	23.4	200	3.8
11279	5154	23.5	200	3.8
11280	5175.5	23.6	200	3.8

11281	5194.5	23.7	200	3.8
11282	5218.5	23.8	200	3.8
11283	5240.5	23.9	200	3.8
11284	5261.5	24	200	3.8
11285	5284.5	24.1	200	3.8
11286	5307.5	24.2	200	3.8
11287	5330.5	24.3	200	3.8
11288	5350.5	24.4	200	3.8
11289	5373	24.5	200	3.8
11290	5396.5	24.6	200	3.8
11291	5418	24.7	200	3.8
11292	5438	24.8	200	3.8
11293	5459.5	24.9	200	3.8
11294	5483	25	200	3.8
11295	5505	25.1	200	3.8
11296	5524.5	25.2	200	3.8
11297	5548	25.3	200	3.8
11298	5572	25.4	200	3.8
11299	5594	25.5	200	3.8
11300	5616	25.6	200	3.8
11301	5638	25.7	200	3.8
11302	5659.5	25.8	200	3.8
11303	5681.5	25.9	200	3.8
11304	5700.5	26	200	3.8
11305	5721	26.1	200	3.8
11306	5745	26.2	200	3.8
11307	5769	26.3	200	3.8
11308	5792.5	26.4	200	3.8
11309	5814.5	26.5	200	3.8
11310	5836.5	26.6	200	3.8
11311	5856.5	26.7	200	3.8
11312	5879.5	26.8	200	3.8
11313	5902.5	26.9	200	3.8
11314	5925	27	200	3.8
11315	5945	27.1	200	3.8
11316	5963.5	27.2	200	3.8
11317	5988.5	27.3	200	3.8
11318	6001	27.4	200	3.8
11624	1	0	300	3.8
11625	1.5	0.1	300	3.8
11626	27	0.2	300	3.8
11627	62	0.3	300	3.8

11628	94.5	0.4	300	3.8
11629	128	0.5	300	3.8
11630	162	0.6	300	3.8
11631	193.5	0.7	300	3.8
11632	227.5	0.8	300	3.8
11633	255.5	0.9	300	3.8
11634	293	1	300	3.8
11635	324.5	1.1	300	3.8
11636	357.5	1.2	300	3.8
11637	393.5	1.3	300	3.8
11638	424.5	1.4	300	3.8
11639	456.5	1.5	300	3.8
11640	490	1.6	300	3.8
11641	521.5	1.7	300	3.8
11642	555.5	1.8	300	3.8
11643	591.5	1.9	300	3.8
11644	623.5	2	300	3.8
11645	657.5	2.1	300	3.8
11646	690	2.2	300	3.8
11647	721.5	2.3	300	3.8
11648	754	2.4	300	3.8
11649	781.5	2.5	300	3.8
11650	824.5	2.6	300	3.8
11651	858.5	2.7	300	3.8
11652	887.5	2.8	300	3.8
11653	920.5	2.9	300	3.8
11654	949	3	300	3.8
11655	982	3.1	300	3.8
11656	1008	3.2	300	3.8
11657	1050	3.3	300	3.8
11658	1087.5	3.4	300	3.8
11659	1120	3.5	300	3.8
11660	1151.5	3.6	300	3.8
11661	1185.5	3.7	300	3.8
11662	1215.5	3.8	300	3.8
11663	1251.5	3.9	300	3.8
11664	1281.5	4	300	3.8
11665	1320	4.1	300	3.8
11666	1352.5	4.2	300	3.8
11667	1386.5	4.3	300	3.8
11668	1417	4.4	300	3.8
11669	1451.5	4.5	300	3.8

11670	1484.5	4.6	300	3.8
11671	1517	4.7	300	3.8
11672	1550	4.8	300	3.8
11673	1584.5	4.9	300	3.8
11674	1617	5	300	3.8
11675	1648.5	5.1	300	3.8
11676	1679.5	5.2	300	3.8
11677	1715.5	5.3	300	3.8
11678	1744	5.4	300	3.8
11679	1781.5	5.5	300	3.8
11680	1814.5	5.6	300	3.8
11681	1849.5	5.7	300	3.8
11682	1883.5	5.8	300	3.8
11683	1915.5	5.9	300	3.8
11684	1947	6	300	3.8
11685	1979.5	6.1	300	3.8
11686	2012.5	6.2	300	3.8
11687	2047.5	6.3	300	3.8
11688	2081.5	6.4	300	3.8
11689	2110.5	6.5	300	3.8
11690	2144.5	6.6	300	3.8
11691	2179.5	6.7	300	3.8
11692	2212.5	6.8	300	3.8
11693	2245	6.9	300	3.8
11694	2279.5	7	300	3.8
11695	2311.5	7.1	300	3.8
11696	2344.5	7.2	300	3.8
11697	2377	7.3	300	3.8
11698	2408.5	7.4	300	3.8
11699	2443.5	7.5	300	3.8
11700	2473.5	7.6	300	3.8
11701	2506.5	7.7	300	3.8
11702	2536	7.8	300	3.8
11703	2574.5	7.9	300	3.8
11704	2605.5	8	300	3.8
11705	2642	8.1	300	3.8
11706	2674.5	8.2	300	3.8
11707	2708	8.3	300	3.8
11708	2740	8.4	300	3.8
11709	2774.5	8.5	300	3.8
11710	2807	8.6	300	3.8
11711	2837.5	8.7	300	3.8

11712	2864.5	8.8	300	3.8
11713	2906.5	8.9	300	3.8
11714	2939.5	9	300	3.8
11715	2972.5	9.1	300	3.8
11716	3005.5	9.2	300	3.8
11717	3039	9.3	300	3.8
11718	3071	9.4	300	3.8
11719	3104	9.5	300	3.8
11720	3137.5	9.6	300	3.8
11721	3170.5	9.7	300	3.8
11722	3203	9.8	300	3.8
11723	3234.5	9.9	300	3.8
11724	3270	10	300	3.8
11725	3302.5	10.1	300	3.8
11726	3336	10.2	300	3.8
11727	3366.5	10.3	300	3.8
11728	3403.5	10.4	300	3.8
11729	3435.5	10.5	300	3.8
11730	3469.5	10.6	300	3.8
11731	3503	10.7	300	3.8
11732	3533.5	10.8	300	3.8
11733	3565.5	10.9	300	3.8
11734	3600	11	300	3.8
11735	3632.5	11.1	300	3.8
11736	3666.5	11.2	300	3.8
11737	3699.5	11.3	300	3.8
11738	3733.5	11.4	300	3.8
11739	3763	11.5	300	3.8
11740	3796.5	11.6	300	3.8
11741	3826.5	11.7	300	3.8
11742	3865	11.8	300	3.8
11743	3897	11.9	300	3.8
11744	3928.5	12	300	3.8
11745	3964	12.1	300	3.8
11746	3998	12.2	300	3.8
11747	4031	12.3	300	3.8
11748	4051.5	12.4	300	3.8
11749	4093.5	12.5	300	3.8
11750	4130	12.6	300	3.8
11751	4160.5	12.7	300	3.8
11752	4197.5	12.8	300	3.8
11753	4228	12.9	300	3.8

11754	4261	13	300	3.8
11755	4292.5	13.1	300	3.8
11756	4327.5	13.2	300	3.8
11757	4360.5	13.3	300	3.8
11758	4391.5	13.4	300	3.8
11759	4425.5	13.5	300	3.8
11760	4458.5	13.6	300	3.8
11761	4491.5	13.7	300	3.8
11762	4525	13.8	300	3.8
11763	4558.5	13.9	300	3.8
11764	4591	14	300	3.8
11765	4623	14.1	300	3.8
11766	4657	14.2	300	3.8
11767	4691	14.3	300	3.8
11768	4724.5	14.4	300	3.8
11769	4754.5	14.5	300	3.8
11770	4789.5	14.6	300	3.8
11771	4823	14.7	300	3.8
11772	4855.5	14.8	300	3.8
11773	4887	14.9	300	3.8
11774	4921	15	300	3.8
11775	4954.5	15.1	300	3.8
11776	4989	15.2	300	3.8
11777	5020	15.3	300	3.8
11778	5053.5	15.4	300	3.8
11779	5088	15.5	300	3.8
11780	5119	15.6	300	3.8
11781	5151	15.7	300	3.8
11782	5185	15.8	300	3.8
11783	5215.5	15.9	300	3.8
11784	5252.5	16	300	3.8
11785	5282.5	16.1	300	3.8
11786	5317	16.2	300	3.8
11787	5349	16.3	300	3.8
11788	5383.5	16.4	300	3.8
11789	5416.5	16.5	300	3.8
11790	5448.5	16.6	300	3.8
11791	5481.5	16.7	300	3.8
11792	5517	16.8	300	3.8
11793	5544.5	16.9	300	3.8
11794	5583.5	17	300	3.8
11795	5615.5	17.1	300	3.8

11796	5647.5	17.2	300	3.8
11797	5679.5	17.3	300	3.8
11798	5710.5	17.4	300	3.8
11799	5746	17.5	300	3.8
11800	5780.5	17.6	300	3.8
11801	5813	17.7	300	3.8
11802	5844	17.8	300	3.8
11803	5878.5	17.9	300	3.8
11804	5913	18	300	3.8
11805	5944	18.1	300	3.8
11806	5977	18.2	300	3.8
11807	6001	18.3	300	3.8
12024	0.5	0	400	3.8
12025	1	0.1	400	3.8
12026	1	0.2	400	3.8
12027	28.5	0.3	400	3.8
12028	74.5	0.4	400	3.8
12029	115.5	0.5	400	3.8
12030	163.5	0.6	400	3.8
12031	205	0.7	400	3.8
12032	248.5	0.8	400	3.8
12033	294	0.9	400	3.8
12034	339	1	400	3.8
12035	384	1.1	400	3.8
12036	425.5	1.2	400	3.8
12037	470	1.3	400	3.8
12038	511	1.4	400	3.8
12039	560	1.5	400	3.8
12040	605	1.6	400	3.8
12041	648	1.7	400	3.8
12042	692.5	1.8	400	3.8
12043	731.5	1.9	400	3.8
12044	775	2	400	3.8
12045	826	2.1	400	3.8
12046	869.5	2.2	400	3.8
12047	913	2.3	400	3.8
12048	948.5	2.4	400	3.8
12049	996.5	2.5	400	3.8
12050	1043	2.6	400	3.8
12051	1089	2.7	400	3.8
12052	1133.5	2.8	400	3.8
12053	1173	2.9	400	3.8

12054	1220.5	3	400	3.8
12055	1263	3.1	400	3.8
12056	1308.5	3.2	400	3.8
12057	1354	3.3	400	3.8
12058	1397.5	3.4	400	3.8
12059	1441	3.5	400	3.8
12060	1484.5	3.6	400	3.8
12061	1528.5	3.7	400	3.8
12062	1574	3.8	400	3.8
12063	1616.5	3.9	400	3.8
12064	1661	4	400	3.8
12065	1706.5	4.1	400	3.8
12066	1746	4.2	400	3.8
12067	1797.5	4.3	400	3.8
12068	1841	4.4	400	3.8
12069	1879.5	4.5	400	3.8
12070	1928	4.6	400	3.8
12071	1970.5	4.7	400	3.8
12072	2014.5	4.8	400	3.8
12073	2058	4.9	400	3.8
12074	2101.5	5	400	3.8
12075	2146	5.1	400	3.8
12076	2191	5.2	400	3.8
12077	2234.5	5.3	400	3.8
12078	2280	5.4	400	3.8
12079	2321.5	5.5	400	3.8
12080	2367	5.6	400	3.8
12081	2413	5.7	400	3.8
12082	2459	5.8	400	3.8
12083	2500.5	5.9	400	3.8
12084	2536.5	6	400	3.8
12085	2588.5	6.1	400	3.8
12086	2633	6.2	400	3.8
12087	2677.5	6.3	400	3.8
12088	2719.5	6.4	400	3.8
12089	2762	6.5	400	3.8
12090	2809	6.6	400	3.8
12091	2848.5	6.7	400	3.8
12092	2897.5	6.8	400	3.8
12093	2940.5	6.9	400	3.8
12094	2985	7	400	3.8
12095	3027.5	7.1	400	3.8

12096	3071.5	7.2	400	3.8
12097	3114	7.3	400	3.8
12098	3159	7.4	400	3.8
12099	3204.5	7.5	400	3.8
12100	3247.5	7.6	400	3.8
12101	3290.5	7.7	400	3.8
12102	3337	7.8	400	3.8
12103	3380	7.9	400	3.8
12104	3423	8	400	3.8
12105	3469	8.1	400	3.8
12106	3514	8.2	400	3.8
12107	3556.5	8.3	400	3.8
12108	3600	8.4	400	3.8
12109	3645	8.5	400	3.8
12110	3690	8.6	400	3.8
12111	3735	8.7	400	3.8
12112	3775.5	8.8	400	3.8
12113	3819.5	8.9	400	3.8
12114	3866.5	9	400	3.8
12115	3908.5	9.1	400	3.8
12116	3950.5	9.2	400	3.8
12117	3998	9.3	400	3.8
12118	4040.5	9.4	400	3.8
12119	4081.5	9.5	400	3.8
12120	4130.5	9.6	400	3.8
12121	4174	9.7	400	3.8
12122	4217.5	9.8	400	3.8
12123	4262	9.9	400	3.8
12124	4306	10	400	3.8
12125	4347.5	10.1	400	3.8
12126	4394	10.2	400	3.8
12127	4437	10.3	400	3.8
12128	4482.5	10.4	400	3.8
12129	4526.5	10.5	400	3.8
12130	4571.5	10.6	400	3.8
12131	4615.5	10.7	400	3.8
12132	4660	10.8	400	3.8
12133	4701.5	10.9	400	3.8
12134	4747.5	11	400	3.8
12135	4791.5	11.1	400	3.8
12136	4834.5	11.2	400	3.8
12137	4877.5	11.3	400	3.8

12138	4923	11.4	400	3.8
12139	4966	11.5	400	3.8
12140	5010.5	11.6	400	3.8
12141	5054.5	11.7	400	3.8
12142	5098	11.8	400	3.8
12143	5140.5	11.9	400	3.8
12144	5186	12	400	3.8
12145	5230.5	12.1	400	3.8
12146	5273.5	12.2	400	3.8
12147	5318.5	12.3	400	3.8
12148	5362	12.4	400	3.8
12149	5406.5	12.5	400	3.8
12150	5449.5	12.6	400	3.8
12151	5493.5	12.7	400	3.8
12152	5536	12.8	400	3.8
12153	5582	12.9	400	3.8
12154	5627	13	400	3.8
12155	5672	13.1	400	3.8
12156	5715	13.2	400	3.8
12157	5759	13.3	400	3.8
12158	5804	13.4	400	3.8
12159	5846	13.5	400	3.8
12160	5890.5	13.6	400	3.8
12161	5932.5	13.7	400	3.8
12162	5977	13.8	400	3.8
12163	6001	13.9	400	3.8
12336	1	0	500	3.8
12337	1.5	0.1	500	3.8
12338	13.5	0.2	500	3.8
12339	75	0.3	500	3.8
12340	129.5	0.4	500	3.8
12341	184	0.5	500	3.8
12342	238.5	0.6	500	3.8
12343	293.5	0.7	500	3.8
12344	348	0.8	500	3.8
12345	405.5	0.9	500	3.8
12346	456.5	1	500	3.8
12347	511	1.1	500	3.8
12348	572.5	1.2	500	3.8
12349	627.5	1.3	500	3.8
12350	682.5	1.4	500	3.8
12351	731.5	1.5	500	3.8

12352	789	1.6	500	3.8
12353	846	1.7	500	3.8
12354	901.5	1.8	500	3.8
12355	952	1.9	500	3.8
12356	1005.5	2	500	3.8
12357	1064	2.1	500	3.8
12358	1119.5	2.2	500	3.8
12359	1174	2.3	500	3.8
12360	1229.5	2.4	500	3.8
12361	1284.5	2.5	500	3.8
12362	1340.5	2.6	500	3.8
12363	1399	2.7	500	3.8
12364	1454	2.8	500	3.8
12365	1510.5	2.9	500	3.8
12366	1563.5	3	500	3.8
12367	1616	3.1	500	3.8
12368	1673	3.2	500	3.8
12369	1727	3.3	500	3.8
12370	1782	3.4	500	3.8
12371	1839.5	3.5	500	3.8
12372	1893.5	3.6	500	3.8
12373	1949	3.7	500	3.8
12374	2007.5	3.8	500	3.8
12375	2056	3.9	500	3.8
12376	2113	4	500	3.8
12377	2169	4.1	500	3.8
12378	2225.5	4.2	500	3.8
12379	2280.5	4.3	500	3.8
12380	2333	4.4	500	3.8
12381	2390.5	4.5	500	3.8
12382	2447.5	4.6	500	3.8
12383	2498.5	4.7	500	3.8
12384	2553.5	4.8	500	3.8
12385	2606.5	4.9	500	3.8
12386	2665.5	5	500	3.8
12387	2723	5.1	500	3.8
12388	2774.5	5.2	500	3.8
12389	2832.5	5.3	500	3.8
12390	2885	5.4	500	3.8
12391	2939.5	5.5	500	3.8
12392	2996.5	5.6	500	3.8
12393	3050.5	5.7	500	3.8

12394	3103.5	5.8	500	3.8
12395	3159	5.9	500	3.8
12396	3215	6	500	3.8
12397	3272	6.1	500	3.8
12398	3324.5	6.2	500	3.8
12399	3378.5	6.3	500	3.8
12400	3437	6.4	500	3.8
12401	3493	6.5	500	3.8
12402	3545	6.6	500	3.8
12403	3600	6.7	500	3.8
12404	3656.5	6.8	500	3.8
12405	3711	6.9	500	3.8
12406	3764.5	7	500	3.8
12407	3820	7.1	500	3.8
12408	3876	7.2	500	3.8
12409	3929.5	7.3	500	3.8
12410	3986.5	7.4	500	3.8
12411	4040	7.5	500	3.8
12412	4096	7.6	500	3.8
12413	4153	7.7	500	3.8
12414	4207	7.8	500	3.8
12415	4264	7.9	500	3.8
12416	4317.5	8	500	3.8
12417	4373	8.1	500	3.8
12418	4427.5	8.2	500	3.8
12419	4482.5	8.3	500	3.8
12420	4536.5	8.4	500	3.8
12421	4592	8.5	500	3.8
12422	4645.5	8.6	500	3.8
12423	4702	8.7	500	3.8
12424	4756.5	8.8	500	3.8
12425	4814.5	8.9	500	3.8
12426	4868	9	500	3.8
12427	4922	9.1	500	3.8
12428	4979	9.2	500	3.8
12429	5033	9.3	500	3.8
12430	5088	9.4	500	3.8
12431	5141.5	9.5	500	3.8
12432	5198	9.6	500	3.8
12433	5252	9.7	500	3.8
12434	5310	9.8	500	3.8
12435	5362	9.9	500	3.8

12436	5418.5	10	500	3.8
12437	5469.5	10.1	500	3.8
12438	5527	10.2	500	3.8
12439	5583	10.3	500	3.8
12440	5639	10.4	500	3.8
12441	5694	10.5	500	3.8
12442	5748	10.6	500	3.8
12443	5803.5	10.7	500	3.8
12444	5857.5	10.8	500	3.8
12445	5912	10.9	500	3.8
12446	5968	11	500	3.8
12447	6001	11.1	500	3.8
12589	1	0	600	3.8
12590	28.5	0.1	600	3.8
12591	95.5	0.2	600	3.8
12592	159	0.3	600	3.8
12593	230	0.4	600	3.8
12594	292.5	0.5	600	3.8
12595	359.5	0.6	600	3.8
12596	424.5	0.7	600	3.8
12597	488.5	0.8	600	3.8
12598	557.5	0.9	600	3.8
12599	628.5	1	600	3.8
12600	689.5	1.1	600	3.8
12601	752.5	1.2	600	3.8
12602	824	1.3	600	3.8
12603	887.5	1.4	600	3.8
12604	952.5	1.5	600	3.8
12605	1014	1.6	600	3.8
12606	1089	1.7	600	3.8
12607	1152	1.8	600	3.8
12608	1218.5	1.9	600	3.8
12609	1286.5	2	600	3.8
12610	1355.5	2.1	600	3.8
12611	1422.5	2.2	600	3.8
12612	1483.5	2.3	600	3.8
12613	1550	2.4	600	3.8
12614	1619.5	2.5	600	3.8
12615	1682	2.6	600	3.8
12616	1744.5	2.7	600	3.8
12617	1814.5	2.8	600	3.8
12618	1882	2.9	600	3.8

12619	1949	3	600	3.8
12620	2014.5	3.1	600	3.8
12621	2080	3.2	600	3.8
12622	2146.5	3.3	600	3.8
12623	2213.5	3.4	600	3.8
12624	2275.5	3.5	600	3.8
12625	2343.5	3.6	600	3.8
12626	2412	3.7	600	3.8
12627	2475.5	3.8	600	3.8
12628	2540.5	3.9	600	3.8
12629	2608.5	4	600	3.8
12630	2677.5	4.1	600	3.8
12631	2740	4.2	600	3.8
12632	2807.5	4.3	600	3.8
12633	2872.5	4.4	600	3.8
12634	2941.5	4.5	600	3.8
12635	3007	4.6	600	3.8
12636	3073	4.7	600	3.8
12637	3138	4.8	600	3.8
12638	3204	4.9	600	3.8
12639	3271.5	5	600	3.8
12640	3334.5	5.1	600	3.8
12641	3404.5	5.2	600	3.8
12642	3469.5	5.3	600	3.8
12643	3535	5.4	600	3.8
12644	3598	5.5	600	3.8
12645	3662	5.6	600	3.8
12646	3732.5	5.7	600	3.8
12647	3796.5	5.8	600	3.8
12648	3865.5	5.9	600	3.8
12649	3928.5	6	600	3.8
12650	4000.5	6.1	600	3.8
12651	4059.5	6.2	600	3.8
12652	4128.5	6.3	600	3.8
12653	4198	6.4	600	3.8
12654	4261.5	6.5	600	3.8
12655	4324.5	6.6	600	3.8
12656	4394.5	6.7	600	3.8
12657	4460.5	6.8	600	3.8
12658	4525.5	6.9	600	3.8
12659	4591.5	7	600	3.8
12660	4657	7.1	600	3.8

12661	4724	7.2	600	3.8
12662	4785.5	7.3	600	3.8
12663	4858	7.4	600	3.8
12664	4921.5	7.5	600	3.8
12665	4989	7.6	600	3.8
12666	5055.5	7.7	600	3.8
12667	5122.5	7.8	600	3.8
12668	5185.5	7.9	600	3.8
12669	5252	8	600	3.8
12670	5320	8.1	600	3.8
12671	5384	8.2	600	3.8
12672	5449	8.3	600	3.8
12673	5516	8.4	600	3.8
12674	5585.5	8.5	600	3.8
12675	5647	8.6	600	3.8
12676	5715	8.7	600	3.8
12677	5782.5	8.8	600	3.8
12678	5843.5	8.9	600	3.8
12679	5913	9	600	3.8
12680	5976	9.1	600	3.8
12681	6001.5	9.2	600	3.8
12807	0.5	0	700	3.8
12808	1	0.1	700	3.8
12809	4.5	0.2	700	3.8
12810	62.5	0.3	700	3.8
12811	135.5	0.4	700	3.8
12812	213	0.5	700	3.8
12813	291.5	0.6	700	3.8
12814	367.5	0.7	700	3.8
12815	441	0.8	700	3.8
12816	518.5	0.9	700	3.8
12817	597	1	700	3.8
12818	678	1.1	700	3.8
12819	751.5	1.2	700	3.8
12820	823.5	1.3	700	3.8
12821	908.5	1.4	700	3.8
12822	977	1.5	700	3.8
12823	1059.5	1.6	700	3.8
12824	1137	1.7	700	3.8
12825	1215	1.8	700	3.8
12826	1295	1.9	700	3.8
12827	1376.5	2	700	3.8

12828	1449	2.1	700	3.8
12829	1524.5	2.2	700	3.8
12830	1601	2.3	700	3.8
12831	1679.5	2.4	700	3.8
12832	1755	2.5	700	3.8
12833	1839.5	2.6	700	3.8
12834	1916	2.7	700	3.8
12835	1992	2.8	700	3.8
12836	2063	2.9	700	3.8
12837	2146.5	3	700	3.8
12838	2227	3.1	700	3.8
12839	2298.5	3.2	700	3.8
12840	2374	3.3	700	3.8
12841	2452.5	3.4	700	3.8
12842	2532.5	3.5	700	3.8
12843	2606.5	3.6	700	3.8
12844	2684.5	3.7	700	3.8
12845	2764	3.8	700	3.8
12846	2840.5	3.9	700	3.8
12847	2914.5	4	700	3.8
12848	2992.5	4.1	700	3.8
12849	3069.5	4.2	700	3.8
12850	3147.5	4.3	700	3.8
12851	3220.5	4.4	700	3.8
12852	3300.5	4.5	700	3.8
12853	3376	4.6	700	3.8
12854	3456	4.7	700	3.8
12855	3531.5	4.8	700	3.8
12856	3604	4.9	700	3.8
12857	3686	5	700	3.8
12858	3759.5	5.1	700	3.8
12859	3844.5	5.2	700	3.8
12860	3918	5.3	700	3.8
12861	3996	5.4	700	3.8
12862	4065	5.5	700	3.8
12863	4146	5.6	700	3.8
12864	4227.5	5.7	700	3.8
12865	4304	5.8	700	3.8
12866	4382.5	5.9	700	3.8
12867	4461	6	700	3.8
12868	4533	6.1	700	3.8
12869	4616	6.2	700	3.8

12870	4687.5	6.3	700	3.8
12871	4765	6.4	700	3.8
12872	4840.5	6.5	700	3.8
12873	4921.5	6.6	700	3.8
12874	4997	6.7	700	3.8
12875	5072.5	6.8	700	3.8
12876	5150	6.9	700	3.8
12877	5226	7	700	3.8
12878	5306	7.1	700	3.8
12879	5381.5	7.2	700	3.8
12880	5458.5	7.3	700	3.8
12881	5536	7.4	700	3.8
12882	5611.5	7.5	700	3.8
12883	5689.5	7.6	700	3.8
12884	5766.5	7.7	700	3.8
12885	5844.5	7.8	700	3.8
12886	5924	7.9	700	3.8
12887	5996.5	8	700	3.8
12888	6001	8.1	700	3.8
12999	1	0	800	3.8
13000	2.5	0.1	800	3.8
13001	52.5	0.2	800	3.8
13002	139	0.3	800	3.8
13003	230	0.4	800	3.8
13004	312	0.5	800	3.8
13005	400.5	0.6	800	3.8
13006	491	0.7	800	3.8
13007	584	0.8	800	3.8
13008	669.5	0.9	800	3.8
13009	752.5	1	800	3.8
13010	846.5	1.1	800	3.8
13011	932.5	1.2	800	3.8
13012	1013	1.3	800	3.8
13013	1105.5	1.4	800	3.8
13014	1196.5	1.5	800	3.8
13015	1286	1.6	800	3.8
13016	1372	1.7	800	3.8
13017	1461.5	1.8	800	3.8
13018	1552	1.9	800	3.8
13019	1639	2	800	3.8
13020	1725.5	2.1	800	3.8
13021	1815	2.2	800	3.8

13022	1906	2.3	800	3.8
13023	1992	2.4	800	3.8
13024	2079	2.5	800	3.8
13025	2167.5	2.6	800	3.8
13026	2253.5	2.7	800	3.8
13027	2343.5	2.8	800	3.8
13028	2433.5	2.9	800	3.8
13029	2522.5	3	800	3.8
13030	2608	3.1	800	3.8
13031	2699	3.2	800	3.8
13032	2784	3.3	800	3.8
13033	2867	3.4	800	3.8
13034	2957.5	3.5	800	3.8
13035	3049	3.6	800	3.8
13036	3139	3.7	800	3.8
13037	3223.5	3.8	800	3.8
13038	3314	3.9	800	3.8
13039	3406.5	4	800	3.8
13040	3490.5	4.1	800	3.8
13041	3574.5	4.2	800	3.8
13042	3661	4.3	800	3.8
13043	3754.5	4.4	800	3.8
13044	3846.5	4.5	800	3.8
13045	3928	4.6	800	3.8
13046	4016.5	4.7	800	3.8
13047	4104.5	4.8	800	3.8
13048	4197	4.9	800	3.8
13049	4284	5	800	3.8
13050	4373	5.1	800	3.8
13051	4463	5.2	800	3.8
13052	4547	5.3	800	3.8
13053	4636	5.4	800	3.8
13054	4727	5.5	800	3.8
13055	4813	5.6	800	3.8
13056	4899	5.7	800	3.8
13057	4988	5.8	800	3.8
13058	5074	5.9	800	3.8
13059	5161.5	6	800	3.8
13060	5254	6.1	800	3.8
13061	5341	6.2	800	3.8
13062	5428	6.3	800	3.8
13063	5520	6.4	800	3.8

13064	5602	6.5	800	3.8
13065	5691	6.6	800	3.8
13066	5783.5	6.7	800	3.8
13067	5866.5	6.8	800	3.8
13068	5952.5	6.9	800	3.8
13069	6000.5	7	800	3.8
13070	6001	7.1	800	3.8
13163	1	0	900	3.8
13164	1.5	0.1	900	3.8
13165	24	0.2	900	3.8
13166	106.5	0.3	900	3.8
13167	207.5	0.4	900	3.8
13168	304	0.5	900	3.8
13169	405	0.6	900	3.8
13170	500	0.7	900	3.8
13171	605	0.8	900	3.8
13172	706.5	0.9	900	3.8
13173	802	1	900	3.8
13174	906	1.1	900	3.8
13175	1002.5	1.2	900	3.8
13176	1101	1.3	900	3.8
13177	1203.5	1.4	900	3.8
13178	1303	1.5	900	3.8
13179	1402	1.6	900	3.8
13180	1503	1.7	900	3.8
13181	1595	1.8	900	3.8
13182	1704	1.9	900	3.8
13183	1803	2	900	3.8
13184	1899	2.1	900	3.8
13185	1998	2.2	900	3.8
13186	2095	2.3	900	3.8
13187	2199	2.4	900	3.8
13188	2296.5	2.5	900	3.8
13189	2395	2.6	900	3.8
13190	2493.5	2.7	900	3.8
13191	2590.5	2.8	900	3.8
13192	2699.5	2.9	900	3.8
13193	2793	3	900	3.8
13194	2894.5	3.1	900	3.8
13195	2994	3.2	900	3.8
13196	3091.5	3.3	900	3.8
13197	3191	3.4	900	3.8

13198	3290	3.5	900	3.8
13199	3387	3.6	900	3.8
13200	3493	3.7	900	3.8
13201	3583	3.8	900	3.8
13202	3689.5	3.9	900	3.8
13203	3787	4	900	3.8
13204	3887.5	4.1	900	3.8
13205	3985.5	4.2	900	3.8
13206	4079	4.3	900	3.8
13207	4183	4.4	900	3.8
13208	4285	4.5	900	3.8
13209	4386.5	4.6	900	3.8
13210	4480	4.7	900	3.8
13211	4585	4.8	900	3.8
13212	4680.5	4.9	900	3.8
13213	4782.5	5	900	3.8
13214	4878	5.1	900	3.8
13215	4978.5	5.2	900	3.8
13216	5077.5	5.3	900	3.8
13217	5174.5	5.4	900	3.8
13218	5271	5.5	900	3.8
13219	5377.5	5.6	900	3.8
13220	5472	5.7	900	3.8
13221	5576.5	5.8	900	3.8
13222	5671	5.9	900	3.8
13223	5775.5	6	900	3.8
13224	5874.5	6.1	900	3.8
13225	5972.5	6.2	900	3.8
13226	6001	6.3	900	3.8
13318	0.5	0	1000	3.8
13319	2.5	0.1	1000	3.8
13320	58.5	0.2	1000	3.8
13321	154	0.3	1000	3.8
13322	260.5	0.4	1000	3.8
13323	379.5	0.5	1000	3.8
13324	488	0.6	1000	3.8
13325	595.5	0.7	1000	3.8
13326	707	0.8	1000	3.8
13327	822	0.9	1000	3.8
13328	930	1	1000	3.8
13329	1033.5	1.1	1000	3.8
13330	1153	1.2	1000	3.8

13331	1259.5	1.3	1000	3.8
13332	1375	1.4	1000	3.8
13333	1480	1.5	1000	3.8
13334	1588	1.6	1000	3.8
13335	1708	1.7	1000	3.8
13336	1812	1.8	1000	3.8
13337	1924.5	1.9	1000	3.8
13338	2031	2	1000	3.8
13339	2141	2.1	1000	3.8
13340	2252	2.2	1000	3.8
13341	2364	2.3	1000	3.8
13342	2478.5	2.4	1000	3.8
13343	2583	2.5	1000	3.8
13344	2698.5	2.6	1000	3.8
13345	2806.5	2.7	1000	3.8
13346	2916	2.8	1000	3.8
13347	3031	2.9	1000	3.8
13348	3137.5	3	1000	3.8
13349	3246	3.1	1000	3.8
13350	3356	3.2	1000	3.8
13351	3471.5	3.3	1000	3.8
13352	3579.5	3.4	1000	3.8
13353	3692.5	3.5	1000	3.8
13354	3797.5	3.6	1000	3.8
13355	3918	3.7	1000	3.8
13356	4019.5	3.8	1000	3.8
13357	4130	3.9	1000	3.8
13358	4245	4	1000	3.8
13359	4348.5	4.1	1000	3.8
13360	4462.5	4.2	1000	3.8
13361	4569.5	4.3	1000	3.8
13362	4686	4.4	1000	3.8
13363	4791	4.5	1000	3.8
13364	4909.5	4.6	1000	3.8
13365	5012.5	4.7	1000	3.8
13366	5128.5	4.8	1000	3.8
13367	5233.5	4.9	1000	3.8
13368	5346	5	1000	3.8
13369	5454	5.1	1000	3.8
13370	5569.5	5.2	1000	3.8
13371	5675.5	5.3	1000	3.8
13372	5786	5.4	1000	3.8

13373	5896	5.5	1000	3.8
13374	6001	5.6	1000	3.8
13456	0.5	0	2000	3.8
13457	1	0.1	2000	3.8
13458	1.5	0.2	2000	3.8
13459	16	0.3	2000	3.8
13460	96	0.4	2000	3.8
13461	216	0.5	2000	3.8
13462	381	0.6	2000	3.8
13463	597.5	0.7	2000	3.8
13464	815.5	0.8	2000	3.8
13465	1035.5	0.9	2000	3.8
13466	1261	1	2000	3.8
13467	1477	1.1	2000	3.8
13468	1714.5	1.2	2000	3.8
13469	1927.5	1.3	2000	3.8
13470	2150.5	1.4	2000	3.8
13471	2361.5	1.5	2000	3.8
13472	2588.5	1.6	2000	3.8
13473	2808.5	1.7	2000	3.8
13474	3023.5	1.8	2000	3.8
13475	3243	1.9	2000	3.8
13476	3482.5	2	2000	3.8
13477	3699	2.1	2000	3.8
13478	3914.5	2.2	2000	3.8
13479	4129.5	2.3	2000	3.8
13480	4343	2.4	2000	3.8
13481	4576	2.5	2000	3.8
13482	4787	2.6	2000	3.8
13483	5010	2.7	2000	3.8
13484	5240.5	2.8	2000	3.8
13485	5452	2.9	2000	3.8
13486	5681	3	2000	3.8
13487	5894.5	3.1	2000	3.8
13488	6001	3.2	2000	3.8
13548	0.5	0	3000	3.8
13549	42	0.1	3000	3.8
13550	133.5	0.2	3000	3.8
13551	269.5	0.3	3000	3.8
13552	456.5	0.4	3000	3.8
13553	707.5	0.5	3000	3.8
13554	974	0.6	3000	3.8

13555	1318.5	0.7	3000	3.8
13556	1646	0.8	3000	3.8
13557	1977.5	0.9	3000	3.8
13558	2297	1	3000	3.8
13559	2637.5	1.1	3000	3.8
13560	2969.5	1.2	3000	3.8
13561	3290	1.3	3000	3.8
13562	3625.5	1.4	3000	3.8
13563	3958	1.5	3000	3.8
13564	4300.5	1.6	3000	3.8
13565	4613.5	1.7	3000	3.8
13566	4951	1.8	3000	3.8
13567	5276.5	1.9	3000	3.8
13568	5622	2	3000	3.8
13569	5947	2.1	3000	3.8
13570	6002	2.2	3000	3.8
13571	6002.5	2.3	3000	3.8
13572	6002	2.4	3000	3.8
13573	6000.5	2.5	3000	3.8
13623	1	0	4000	3.8
13624	41.5	0.1	4000	3.8
13625	136.5	0.2	4000	3.8
13626	273.5	0.3	4000	3.8
13627	462.5	0.4	4000	3.8
13628	713	0.5	4000	3.8
13629	982.5	0.6	4000	3.8
13630	1335.5	0.7	4000	3.8
13631	1721.5	0.8	4000	3.8
13632	2115.5	0.9	4000	3.8
13633	2570	1	4000	3.8
13634	3010.5	1.1	4000	3.8
13635	3451.5	1.2	4000	3.8
13636	3908	1.3	4000	3.8
13637	4332.5	1.4	4000	3.8
13638	4777.5	1.5	4000	3.8
13639	5239	1.6	4000	3.8
13640	5682.5	1.7	4000	3.8
13641	6007.5	1.8	4000	3.8
13642	6004.5	1.9	4000	3.8
13643	6003	2	4000	3.8
13644	6002.5	2.1	4000	3.8
16569	0	0	100	64.33

16570	1	0.1	100	64.33
16571	15	0.2	100	64.33
16572	22.5	0.3	100	64.33
16573	30.5	0.4	100	64.33
16574	43	0.5	100	64.33
16575	54.5	0.6	100	64.33
16576	65.5	0.7	100	64.33
16577	74	0.8	100	64.33
16578	84.5	0.9	100	64.33
16579	93.5	1	100	64.33
16580	104.5	1.1	100	64.33
16581	115	1.2	100	64.33
16582	125.5	1.3	100	64.33
16583	139	1.4	100	64.33
16584	148	1.5	100	64.33
16585	161.5	1.6	100	64.33
16586	171.5	1.7	100	64.33
16587	183.5	1.8	100	64.33
16588	193	1.9	100	64.33
16589	203.5	2	100	64.33
16590	217.5	2.1	100	64.33
16591	229.5	2.2	100	64.33
16592	236	2.3	100	64.33
16593	252.5	2.4	100	64.33
16594	259	2.5	100	64.33
16595	270	2.6	100	64.33
16596	279.5	2.7	100	64.33
16597	290	2.8	100	64.33
16598	302.5	2.9	100	64.33
16599	316.5	3	100	64.33
16600	329	3.1	100	64.33
16601	340	3.2	100	64.33
16602	349	3.3	100	64.33
16603	355.5	3.4	100	64.33
16604	366	3.5	100	64.33
16605	382	3.6	100	64.33
16606	395.5	3.7	100	64.33
16607	406.5	3.8	100	64.33
16608	418	3.9	100	64.33
16609	426	4	100	64.33
16610	434	4.1	100	64.33
16611	445	4.2	100	64.33

16612	455.5	4.3	100	64.33
16613	464.5	4.4	100	64.33
16614	479	4.5	100	64.33
16615	491.5	4.6	100	64.33
16616	505.5	4.7	100	64.33
16617	516	4.8	100	64.33
16618	525.5	4.9	100	64.33
16619	537	5	100	64.33
16620	547.5	5.1	100	64.33
16621	561.5	5.2	100	64.33
16622	571.5	5.3	100	64.33
16623	582	5.4	100	64.33
16624	593	5.5	100	64.33
16625	604.5	5.6	100	64.33
16626	617.5	5.7	100	64.33
16627	628	5.8	100	64.33
16628	639	5.9	100	64.33
16629	648	6	100	64.33
16630	660.5	6.1	100	64.33
16631	672	6.2	100	64.33
16632	681.5	6.3	100	64.33
16633	690	6.4	100	64.33
16634	704	6.5	100	64.33
16635	714.5	6.6	100	64.33
16636	724.5	6.7	100	64.33
16637	732	6.8	100	64.33
16638	746	6.9	100	64.33
16639	759	7	100	64.33
16640	769	7.1	100	64.33
16641	781	7.2	100	64.33
16642	792	7.3	100	64.33
16643	803.5	7.4	100	64.33
16644	815.5	7.5	100	64.33
16645	826.5	7.6	100	64.33
16646	838	7.7	100	64.33
16647	848.5	7.8	100	64.33
16648	858.5	7.9	100	64.33
16649	868.5	8	100	64.33
16650	882	8.1	100	64.33
16651	892.5	8.2	100	64.33
16652	903.5	8.3	100	64.33
16653	915.5	8.4	100	64.33

16654	926	8.5	100	64.33
16655	935	8.6	100	64.33
16656	945	8.7	100	64.33
16657	955.5	8.8	100	64.33
16658	964.5	8.9	100	64.33
16659	975	9	100	64.33
16660	986.5	9.1	100	64.33
16661	998.5	9.2	100	64.33
16662	1010.5	9.3	100	64.33
16663	1025	9.4	100	64.33
16664	1034	9.5	100	64.33
16665	1042.5	9.6	100	64.33
16666	1054.5	9.7	100	64.33
16667	1067	9.8	100	64.33
16668	1080	9.9	100	64.33
16669	1092	10	100	64.33
16670	1103.5	10.1	100	64.33
16671	1114.5	10.2	100	64.33
16672	1124.5	10.3	100	64.33
16673	1135.5	10.4	100	64.33
16674	1146.5	10.5	100	64.33
16675	1156	10.6	100	64.33
16676	1169	10.7	100	64.33
16677	1180.5	10.8	100	64.33
16678	1190.5	10.9	100	64.33
16679	1202.5	11	100	64.33
16680	1212.5	11.1	100	64.33
16681	1223.5	11.2	100	64.33
16682	1234.5	11.3	100	64.33
16683	1246	11.4	100	64.33
16684	1256.5	11.5	100	64.33
16685	1268	11.6	100	64.33
16686	1279	11.7	100	64.33
16687	1290	11.8	100	64.33
16688	1301	11.9	100	64.33
16689	1311	12	100	64.33
16690	1321.5	12.1	100	64.33
16691	1333.5	12.2	100	64.33
16692	1344.5	12.3	100	64.33
16693	1356	12.4	100	64.33
16694	1367.5	12.5	100	64.33
16695	1377.5	12.6	100	64.33

16696	1389.5	12.7	100	64.33
16697	1400	12.8	100	64.33
16698	1411.5	12.9	100	64.33
16699	1422	13	100	64.33
16700	1432	13.1	100	64.33
16701	1444.5	13.2	100	64.33
16702	1455.5	13.3	100	64.33
16703	1466.5	13.4	100	64.33
16704	1476.5	13.5	100	64.33
16705	1487.5	13.6	100	64.33
16706	1498.5	13.7	100	64.33
16707	1509.5	13.8	100	64.33
16708	1521	13.9	100	64.33
16709	1531	14	100	64.33
16710	1543.5	14.1	100	64.33
16711	1554.5	14.2	100	64.33
16712	1564.5	14.3	100	64.33
16713	1576	14.4	100	64.33
16714	1587.5	14.5	100	64.33
16715	1597.5	14.6	100	64.33
16716	1608.5	14.7	100	64.33
16717	1620	14.8	100	64.33
16718	1631.5	14.9	100	64.33
16719	1641.5	15	100	64.33
16720	1653.5	15.1	100	64.33
16721	1664	15.2	100	64.33
16722	1675	15.3	100	64.33
16723	1687	15.4	100	64.33
16724	1698	15.5	100	64.33
16725	1709	15.6	100	64.33
16726	1720	15.7	100	64.33
16727	1730	15.8	100	64.33
16728	1742.5	15.9	100	64.33
16729	1751.5	16	100	64.33
16730	1763	16.1	100	64.33
16731	1774	16.2	100	64.33
16732	1785	16.3	100	64.33
16733	1796	16.4	100	64.33
16734	1806.5	16.5	100	64.33
16735	1819	16.6	100	64.33
16736	1829	16.7	100	64.33
16737	1839.5	16.8	100	64.33

16738	1851	16.9	100	64.33
16739	1862.5	17	100	64.33
16740	1873.5	17.1	100	64.33
16741	1884	17.2	100	64.33
16742	1895.5	17.3	100	64.33
16743	1907	17.4	100	64.33
16744	1918	17.5	100	64.33
16745	1929.5	17.6	100	64.33
16746	1940	17.7	100	64.33
16747	1950.5	17.8	100	64.33
16748	1961	17.9	100	64.33
16749	1973	18	100	64.33
16750	1984	18.1	100	64.33
16751	1995	18.2	100	64.33
16752	2006	18.3	100	64.33
16753	2017	18.4	100	64.33
16754	2027.5	18.5	100	64.33
16755	2038	18.6	100	64.33
16756	2049	18.7	100	64.33
16757	2060.5	18.8	100	64.33
16758	2071.5	18.9	100	64.33
16759	2082.5	19	100	64.33
16760	2093.5	19.1	100	64.33
16761	2104.5	19.2	100	64.33
16762	2116	19.3	100	64.33
16763	2126.5	19.4	100	64.33
16764	2137.5	19.5	100	64.33
16765	2149	19.6	100	64.33
16766	2161	19.7	100	64.33
16767	2171	19.8	100	64.33
16768	2182	19.9	100	64.33
16769	2193	20	100	64.33
16770	2204.5	20.1	100	64.33
16771	2214.5	20.2	100	64.33
16772	2225.5	20.3	100	64.33
16773	2236.5	20.4	100	64.33
16774	2248	20.5	100	64.33
16775	2258	20.6	100	64.33
16776	2270	20.7	100	64.33
16777	2281	20.8	100	64.33
16778	2292	20.9	100	64.33
16779	2302.5	21	100	64.33

16780	2313.5	21.1	100	64.33
16781	2325.5	21.2	100	64.33
16782	2335.5	21.3	100	64.33
16783	2347	21.4	100	64.33
16784	2357.5	21.5	100	64.33
16785	2369	21.6	100	64.33
16786	2380	21.7	100	64.33
16787	2391	21.8	100	64.33
16788	2401.5	21.9	100	64.33
16789	2412.5	22	100	64.33
16790	2424.5	22.1	100	64.33
16791	2435.5	22.2	100	64.33
16792	2446	22.3	100	64.33
16793	2457.5	22.4	100	64.33
16794	2468	22.5	100	64.33
16795	2478.5	22.6	100	64.33
16796	2490	22.7	100	64.33
16797	2502	22.8	100	64.33
16798	2512	22.9	100	64.33
16799	2522.5	23	100	64.33
16800	2533.5	23.1	100	64.33
16801	2545	23.2	100	64.33
16802	2556	23.3	100	64.33
16803	2566.5	23.4	100	64.33
16804	2577.5	23.5	100	64.33
16805	2589	23.6	100	64.33
16806	2600.5	23.7	100	64.33
16807	2610.5	23.8	100	64.33
16808	2622	23.9	100	64.33
16809	2633	24	100	64.33
16810	2644	24.1	100	64.33
16811	2655	24.2	100	64.33
16812	2667	24.3	100	64.33
16813	2677.5	24.4	100	64.33
16814	2689	24.5	100	64.33
16815	2699.5	24.6	100	64.33
16816	2710.5	24.7	100	64.33
16817	2721	24.8	100	64.33
16818	2732	24.9	100	64.33
16819	2742.5	25	100	64.33
16820	2754	25.1	100	64.33
16821	2765	25.2	100	64.33

16822	2776.5	25.3	100	64.33
16823	2787.5	25.4	100	64.33
16824	2798	25.5	100	64.33
16825	2807	25.6	100	64.33
16826	2818.5	25.7	100	64.33
16827	2831	25.8	100	64.33
16828	2842	25.9	100	64.33
16829	2852.5	26	100	64.33
16830	2864	26.1	100	64.33
16831	2875.5	26.2	100	64.33
16832	2887	26.3	100	64.33
16833	2898	26.4	100	64.33
16834	2908.5	26.5	100	64.33
16835	2920	26.6	100	64.33
16836	2930.5	26.7	100	64.33
16837	2941.5	26.8	100	64.33
16838	2952	26.9	100	64.33
16839	2963.5	27	100	64.33
16840	2974.5	27.1	100	64.33
16841	2985.5	27.2	100	64.33
16842	2996.5	27.3	100	64.33
16843	3007.5	27.4	100	64.33
16844	3019	27.5	100	64.33
16845	3030	27.6	100	64.33
16846	3041	27.7	100	64.33
16847	3051	27.8	100	64.33
16848	3062.5	27.9	100	64.33
16849	3073	28	100	64.33
16850	3084.5	28.1	100	64.33
16851	3095.5	28.2	100	64.33
16852	3107	28.3	100	64.33
16853	3118	28.4	100	64.33
16854	3129	28.5	100	64.33
16855	3139	28.6	100	64.33
16856	3150	28.7	100	64.33
16857	3162	28.8	100	64.33
16858	3172.5	28.9	100	64.33
16859	3184	29	100	64.33
16860	3195	29.1	100	64.33
16861	3206	29.2	100	64.33
16862	3217	29.3	100	64.33
16863	3228	29.4	100	64.33

16864	3238.5	29.5	100	64.33
16865	3250.5	29.6	100	64.33
16866	3260.5	29.7	100	64.33
16867	3272	29.8	100	64.33
16868	3283	29.9	100	64.33
16869	3294	30	100	64.33
16870	3303.5	30.1	100	64.33
16871	3315.5	30.2	100	64.33
16872	3327	30.3	100	64.33
16873	3338	30.4	100	64.33
16874	3348	30.5	100	64.33
16875	3358.5	30.6	100	64.33
16876	3369.5	30.7	100	64.33
16877	3382	30.8	100	64.33
16878	3393	30.9	100	64.33
16879	3403.5	31	100	64.33
16880	3415	31.1	100	64.33
16881	3426.5	31.2	100	64.33
16882	3436.5	31.3	100	64.33
16883	3448	31.4	100	64.33
16884	3459	31.5	100	64.33
16885	3470.5	31.6	100	64.33
16886	3481	31.7	100	64.33
16887	3492	31.8	100	64.33
16888	3503.5	31.9	100	64.33
16889	3513.5	32	100	64.33
16890	3524.5	32.1	100	64.33
16891	3536	32.2	100	64.33
16892	3545.5	32.3	100	64.33
16893	3557.5	32.4	100	64.33
16894	3568.5	32.5	100	64.33
16895	3580	32.6	100	64.33
16896	3591	32.7	100	64.33
16897	3602	32.8	100	64.33
16898	3614	32.9	100	64.33
16899	3624	33	100	64.33
16900	3635.5	33.1	100	64.33
16901	3646	33.2	100	64.33
16902	3658	33.3	100	64.33
16903	3668.5	33.4	100	64.33
16904	3679	33.5	100	64.33
16905	3689.5	33.6	100	64.33

16906	3701	33.7	100	64.33
16907	3712.5	33.8	100	64.33
16908	3723.5	33.9	100	64.33
16909	3733.5	34	100	64.33
16910	3745	34.1	100	64.33
16911	3756.5	34.2	100	64.33
16912	3767	34.3	100	64.33
16913	3778.5	34.4	100	64.33
16914	3787.5	34.5	100	64.33
16915	3799	34.6	100	64.33
16916	3809.5	34.7	100	64.33
16917	3822	34.8	100	64.33
16918	3832.5	34.9	100	64.33
16919	3843.5	35	100	64.33
16920	3854.5	35.1	100	64.33
16921	3864.5	35.2	100	64.33
16922	3876.5	35.3	100	64.33
16923	3888.5	35.4	100	64.33
16924	3899.5	35.5	100	64.33
16925	3911	35.6	100	64.33
16926	3921	35.7	100	64.33
16927	3932.5	35.8	100	64.33
16928	3943.5	35.9	100	64.33
16929	3954.5	36	100	64.33
16930	3966	36.1	100	64.33
16931	3977	36.2	100	64.33
16932	3987.5	36.3	100	64.33
16933	3998.5	36.4	100	64.33
16934	4010.5	36.5	100	64.33
16935	4021	36.6	100	64.33
16936	4031	36.7	100	64.33
16937	4041	36.8	100	64.33
16938	4052	36.9	100	64.33
16939	4064	37	100	64.33
16940	4075	37.1	100	64.33
16941	4086	37.2	100	64.33
16942	4098	37.3	100	64.33
16943	4108	37.4	100	64.33
16944	4120	37.5	100	64.33
16945	4131	37.6	100	64.33
16946	4141	37.7	100	64.33
16947	4152.5	37.8	100	64.33

16948	4163.5	37.9	100	64.33
16949	4175	38	100	64.33
16950	4186	38.1	100	64.33
16951	4197.5	38.2	100	64.33
16952	4207.5	38.3	100	64.33
16953	4219	38.4	100	64.33
16954	4230	38.5	100	64.33
16955	4240	38.6	100	64.33
16956	4251	38.7	100	64.33
16957	4263	38.8	100	64.33
16958	4273.5	38.9	100	64.33
16959	4284.5	39	100	64.33
16960	4295.5	39.1	100	64.33
16961	4306.5	39.2	100	64.33
16962	4317.5	39.3	100	64.33
16963	4328	39.4	100	64.33
16964	4340	39.5	100	64.33
16965	4350.5	39.6	100	64.33
16966	4362	39.7	100	64.33
16967	4372.5	39.8	100	64.33
16968	4384	39.9	100	64.33
16969	4395	40	100	64.33
16970	4404.5	40.1	100	64.33
16971	4418	40.2	100	64.33
16972	4428	40.3	100	64.33
16973	4440	40.4	100	64.33
16974	4450.5	40.5	100	64.33
16975	4461	40.6	100	64.33
16976	4471.5	40.7	100	64.33
16977	4483	40.8	100	64.33
16978	4495	40.9	100	64.33
16979	4505	41	100	64.33
16980	4516	41.1	100	64.33
16981	4527	41.2	100	64.33
16982	4538	41.3	100	64.33
16983	4548	41.4	100	64.33
16984	4559	41.5	100	64.33
16985	4569.5	41.6	100	64.33
16986	4582	41.7	100	64.33
16987	4592.5	41.8	100	64.33
16988	4603	41.9	100	64.33
16989	4615	42	100	64.33

16990	4626	42.1	100	64.33
16991	4637	42.2	100	64.33
16992	4648	42.3	100	64.33
16993	4658.5	42.4	100	64.33
16994	4671	42.5	100	64.33
16995	4681.5	42.6	100	64.33
16996	4692.5	42.7	100	64.33
16997	4703	42.8	100	64.33
16998	4715	42.9	100	64.33
16999	4725.5	43	100	64.33
17000	4736.5	43.1	100	64.33
17001	4747	43.2	100	64.33
17002	4758.5	43.3	100	64.33
17003	4770	43.4	100	64.33
17004	4781	43.5	100	64.33
17005	4791	43.6	100	64.33
17006	4803	43.7	100	64.33
17007	4813.5	43.8	100	64.33
17008	4823.5	43.9	100	64.33
17009	4835.5	44	100	64.33
17010	4846	44.1	100	64.33
17011	4858	44.2	100	64.33
17012	4868.5	44.3	100	64.33
17013	4880.5	44.4	100	64.33
17014	4891	44.5	100	64.33
17015	4901	44.6	100	64.33
17016	4912.5	44.7	100	64.33
17017	4924.5	44.8	100	64.33
17018	4935	44.9	100	64.33
17019	4946.5	45	100	64.33
17020	4957	45.1	100	64.33
17021	4968.5	45.2	100	64.33
17022	4979.5	45.3	100	64.33
17023	4989	45.4	100	64.33
17024	5000.5	45.5	100	64.33
17025	5012.5	45.6	100	64.33
17026	5021.5	45.7	100	64.33
17027	5032.5	45.8	100	64.33
17028	5044	45.9	100	64.33
17029	5053	46	100	64.33
17030	5067	46.1	100	64.33
17031	5076	46.2	100	64.33

17032	5089.5	46.3	100	64.33
17033	5100	46.4	100	64.33
17034	5110.5	46.5	100	64.33
17035	5122	46.6	100	64.33
17036	5132.5	46.7	100	64.33
17037	5144	46.8	100	64.33
17038	5154.5	46.9	100	64.33
17039	5166.5	47	100	64.33
17040	5177	47.1	100	64.33
17041	5188	47.2	100	64.33
17042	5199.5	47.3	100	64.33
17043	5210.5	47.4	100	64.33
17044	5221	47.5	100	64.33
17045	5232	47.6	100	64.33
17046	5242.5	47.7	100	64.33
17047	5254	47.8	100	64.33
17048	5265	47.9	100	64.33
17049	5276.5	48	100	64.33
17050	5287	48.1	100	64.33
17051	5297	48.2	100	64.33
17052	5309	48.3	100	64.33
17053	5320.5	48.4	100	64.33
17054	5332	48.5	100	64.33
17055	5342	48.6	100	64.33
17056	5353	48.7	100	64.33
17057	5364.5	48.8	100	64.33
17058	5375.5	48.9	100	64.33
17059	5387	49	100	64.33
17060	5397.5	49.1	100	64.33
17061	5408.5	49.2	100	64.33
17062	5420	49.3	100	64.33
17063	5431.5	49.4	100	64.33
17064	5441.5	49.5	100	64.33
17065	5453	49.6	100	64.33
17066	5464	49.7	100	64.33
17067	5474.5	49.8	100	64.33
17068	5485.5	49.9	100	64.33
17069	5496	50	100	64.33
17070	5507.5	50.1	100	64.33
17071	5519	50.2	100	64.33
17072	5529	50.3	100	64.33
17073	5541	50.4	100	64.33

17074	5551.5	50.5	100	64.33
17075	5563	50.6	100	64.33
17076	5573	50.7	100	64.33
17077	5585	50.8	100	64.33
17078	5596	50.9	100	64.33
17079	5607.5	51	100	64.33
17080	5618.5	51.1	100	64.33
17081	5629	51.2	100	64.33
17082	5640.5	51.3	100	64.33
17083	5651.5	51.4	100	64.33
17084	5663	51.5	100	64.33
17085	5673.5	51.6	100	64.33
17086	5685	51.7	100	64.33
17087	5695	51.8	100	64.33
17088	5706.5	51.9	100	64.33
17089	5717	52	100	64.33
17090	5728	52.1	100	64.33
17091	5739	52.2	100	64.33
17092	5750	52.3	100	64.33
17093	5761	52.4	100	64.33
17094	5773	52.5	100	64.33
17095	5784	52.6	100	64.33
17096	5794	52.7	100	64.33
17097	5805	52.8	100	64.33
17098	5817	52.9	100	64.33
17099	5827.5	53	100	64.33
17100	5838.5	53.1	100	64.33
17101	5849.5	53.2	100	64.33
17102	5859.5	53.3	100	64.33
17103	5871	53.4	100	64.33
17104	5881.5	53.5	100	64.33
17105	5893.5	53.6	100	64.33
17106	5904	53.7	100	64.33
17107	5915.5	53.8	100	64.33
17108	5926.5	53.9	100	64.33
17109	5938	54	100	64.33
17110	5949	54.1	100	64.33
17111	5960.5	54.2	100	64.33
17112	5971	54.3	100	64.33
17113	5981.5	54.4	100	64.33
17114	5993.5	54.5	100	64.33
17115	5999.5	54.6	100	64.33

17116	6000	54.7	100	64.33
17693	0	0	200	64.33
17694	0.5	0.1	200	64.33
17695	16	0.2	200	64.33
17696	30	0.3	200	64.33
17697	56	0.4	200	64.33
17698	74.5	0.5	200	64.33
17699	93.5	0.6	200	64.33
17700	116	0.7	200	64.33
17701	138.5	0.8	200	64.33
17702	164.5	0.9	200	64.33
17703	183.5	1	200	64.33
17704	203.5	1.1	200	64.33
17705	226	1.2	200	64.33
17706	249	1.3	200	64.33
17707	271.5	1.4	200	64.33
17708	295	1.5	200	64.33
17709	318.5	1.6	200	64.33
17710	339	1.7	200	64.33
17711	359	1.8	200	64.33
17712	385.5	1.9	200	64.33
17713	406.5	2	200	64.33
17714	429.5	2.1	200	64.33
17715	451.5	2.2	200	64.33
17716	473.5	2.3	200	64.33
17717	491.5	2.4	200	64.33
17718	516.5	2.5	200	64.33
17719	539	2.6	200	64.33
17720	561.5	2.7	200	64.33
17721	582.5	2.8	200	64.33
17722	605	2.9	200	64.33
17723	628.5	3	200	64.33
17724	650	3.1	200	64.33
17725	674	3.2	200	64.33
17726	696	3.3	200	64.33
17727	718	3.4	200	64.33
17728	737	3.5	200	64.33
17729	755	3.6	200	64.33
17730	781	3.7	200	64.33
17731	804.5	3.8	200	64.33
17732	827.5	3.9	200	64.33
17733	848	4	200	64.33

17734	869	4.1	200	64.33
17735	893	4.2	200	64.33
17736	914	4.3	200	64.33
17737	937	4.4	200	64.33
17738	958.5	4.5	200	64.33
17739	977.5	4.6	200	64.33
17740	1002	4.7	200	64.33
17741	1024.5	4.8	200	64.33
17742	1045.5	4.9	200	64.33
17743	1069	5	200	64.33
17744	1092.5	5.1	200	64.33
17745	1114.5	5.2	200	64.33
17746	1137.5	5.3	200	64.33
17747	1158.5	5.4	200	64.33
17748	1181.5	5.5	200	64.33
17749	1203	5.6	200	64.33
17750	1224.5	5.7	200	64.33
17751	1246	5.8	200	64.33
17752	1268.5	5.9	200	64.33
17753	1291	6	200	64.33
17754	1313.5	6.1	200	64.33
17755	1334	6.2	200	64.33
17756	1357	6.3	200	64.33
17757	1378.5	6.4	200	64.33
17758	1400.5	6.5	200	64.33
17759	1422.5	6.6	200	64.33
17760	1445.5	6.7	200	64.33
17761	1467	6.8	200	64.33
17762	1489.5	6.9	200	64.33
17763	1511	7	200	64.33
17764	1533.5	7.1	200	64.33
17765	1555	7.2	200	64.33
17766	1577	7.3	200	64.33
17767	1598.5	7.4	200	64.33
17768	1621.5	7.5	200	64.33
17769	1643	7.6	200	64.33
17770	1666.5	7.7	200	64.33
17771	1688.5	7.8	200	64.33
17772	1710	7.9	200	64.33
17773	1730.5	8	200	64.33
17774	1752.5	8.1	200	64.33
17775	1776	8.2	200	64.33

17776	1798	8.3	200	64.33
17777	1820	8.4	200	64.33
17778	1840	8.5	200	64.33
17779	1864	8.6	200	64.33
17780	1885	8.7	200	64.33
17781	1907	8.8	200	64.33
17782	1929.5	8.9	200	64.33
17783	1952	9	200	64.33
17784	1974	9.1	200	64.33
17785	1996	9.2	200	64.33
17786	2018.5	9.3	200	64.33
17787	2039	9.4	200	64.33
17788	2063	9.5	200	64.33
17789	2083.5	9.6	200	64.33
17790	2106	9.7	200	64.33
17791	2128.5	9.8	200	64.33
17792	2151.5	9.9	200	64.33
17793	2171	10	200	64.33
17794	2194.5	10.1	200	64.33
17795	2216	10.2	200	64.33
17796	2238	10.3	200	64.33
17797	2260	10.4	200	64.33
17798	2283.5	10.5	200	64.33
17799	2303.5	10.6	200	64.33
17800	2327	10.7	200	64.33
17801	2348.5	10.8	200	64.33
17802	2371	10.9	200	64.33
17803	2392	11	200	64.33
17804	2416	11.1	200	64.33
17805	2438	11.2	200	64.33
17806	2458.5	11.3	200	64.33
17807	2482	11.4	200	64.33
17808	2503	11.5	200	64.33
17809	2524	11.6	200	64.33
17810	2547.5	11.7	200	64.33
17811	2569.5	11.8	200	64.33
17812	2589.5	11.9	200	64.33
17813	2613.5	12	200	64.33
17814	2635	12.1	200	64.33
17815	2656.5	12.2	200	64.33
17816	2677.5	12.3	200	64.33
17817	2700	12.4	200	64.33

17818	2723	12.5	200	64.33
17819	2746.5	12.6	200	64.33
17820	2766.5	12.7	200	64.33
17821	2789	12.8	200	64.33
17822	2811.5	12.9	200	64.33
17823	2833.5	13	200	64.33
17824	2854.5	13.1	200	64.33
17825	2877	13.2	200	64.33
17826	2900	13.3	200	64.33
17827	2920	13.4	200	64.33
17828	2944	13.5	200	64.33
17829	2964	13.6	200	64.33
17830	2987	13.7	200	64.33
17831	3010.5	13.8	200	64.33
17832	3031	13.9	200	64.33
17833	3052.5	14	200	64.33
17834	3076.5	14.1	200	64.33
17835	3097	14.2	200	64.33
17836	3120.5	14.3	200	64.33
17837	3140	14.4	200	64.33
17838	3162.5	14.5	200	64.33
17839	3184.5	14.6	200	64.33
17840	3207	14.7	200	64.33
17841	3229	14.8	200	64.33
17842	3252	14.9	200	64.33
17843	3273.5	15	200	64.33
17844	3296.5	15.1	200	64.33
17845	3317.5	15.2	200	64.33
17846	3339.5	15.3	200	64.33
17847	3361.5	15.4	200	64.33
17848	3383.5	15.5	200	64.33
17849	3404.5	15.6	200	64.33
17850	3428.5	15.7	200	64.33
17851	3448.5	15.8	200	64.33
17852	3472.5	15.9	200	64.33
17853	3492	16	200	64.33
17854	3516	16.1	200	64.33
17855	3537.5	16.2	200	64.33
17856	3558.5	16.3	200	64.33
17857	3580	16.4	200	64.33
17858	3604.5	16.5	200	64.33
17859	3625.5	16.6	200	64.33

17860	3648.5	16.7	200	64.33
17861	3669.5	16.8	200	64.33
17862	3692.5	16.9	200	64.33
17863	3713	17	200	64.33
17864	3735.5	17.1	200	64.33
17865	3757.5	17.2	200	64.33
17866	3780.5	17.3	200	64.33
17867	3802	17.4	200	64.33
17868	3823	17.5	200	64.33
17869	3845	17.6	200	64.33
17870	3869	17.7	200	64.33
17871	3889.5	17.8	200	64.33
17872	3911.5	17.9	200	64.33
17873	3934	18	200	64.33
17874	3956.5	18.1	200	64.33
17875	3977.5	18.2	200	64.33
17876	3999	18.3	200	64.33
17877	4021.5	18.4	200	64.33
17878	4043	18.5	200	64.33
17879	4065.5	18.6	200	64.33
17880	4087	18.7	200	64.33
17881	4110.5	18.8	200	64.33
17882	4132.5	18.9	200	64.33
17883	4151.5	19	200	64.33
17884	4177	19.1	200	64.33
17885	4196.5	19.2	200	64.33
17886	4221	19.3	200	64.33
17887	4242	19.4	200	64.33
17888	4264	19.5	200	64.33
17889	4285	19.6	200	64.33
17890	4308.5	19.7	200	64.33
17891	4329.5	19.8	200	64.33
17892	4350.5	19.9	200	64.33
17893	4370.5	20	200	64.33
17894	4392.5	20.1	200	64.33
17895	4406.5	20.2	200	64.33
17896	4438.5	20.3	200	64.33
17897	4461	20.4	200	64.33
17898	4484	20.5	200	64.33
17899	4506.5	20.6	200	64.33
17900	4527.5	20.7	200	64.33
17901	4546	20.8	200	64.33

17902	4565.5	20.9	200	64.33
17903	4585	21	200	64.33
17904	4614	21.1	200	64.33
17905	4636	21.2	200	64.33
17906	4658.5	21.3	200	64.33
17907	4678	21.4	200	64.33
17908	4704.5	21.5	200	64.33
17909	4724	21.6	200	64.33
17910	4746	21.7	200	64.33
17911	4766.5	21.8	200	64.33
17912	4785	21.9	200	64.33
17913	4808.5	22	200	64.33
17914	4832	22.1	200	64.33
17915	4854	22.2	200	64.33
17916	4875	22.3	200	64.33
17917	4897	22.4	200	64.33
17918	4916.5	22.5	200	64.33
17919	4939.5	22.6	200	64.33
17920	4963.5	22.7	200	64.33
17921	4983	22.8	200	64.33
17922	5003	22.9	200	64.33
17923	5023.5	23	200	64.33
17924	5045.5	23.1	200	64.33
17925	5069.5	23.2	200	64.33
17926	5088.5	23.3	200	64.33
17927	5113	23.4	200	64.33
17928	5140	23.5	200	64.33
17929	5154.5	23.6	200	64.33
17930	5170.5	23.7	200	64.33
17931	5200.5	23.8	200	64.33
17932	5224.5	23.9	200	64.33
17933	5245	24	200	64.33
17934	5267.5	24.1	200	64.33
17935	5284.5	24.2	200	64.33
17936	5302	24.3	200	64.33
17937	5326.5	24.4	200	64.33
17938	5351	24.5	200	64.33
17939	5369.5	24.6	200	64.33
17940	5400	24.7	200	64.33
17941	5418	24.8	200	64.33
17942	5438	24.9	200	64.33
17943	5461.5	25	200	64.33

17944	5482.5	25.1	200	64.33
17945	5506	25.2	200	64.33
17946	5529.5	25.3	200	64.33
17947	5553	25.4	200	64.33
17948	5573.5	25.5	200	64.33
17949	5596	25.6	200	64.33
17950	5615.5	25.7	200	64.33
17951	5639	25.8	200	64.33
17952	5656.5	25.9	200	64.33
17953	5681.5	26	200	64.33
17954	5701.5	26.1	200	64.33
17955	5727	26.2	200	64.33
17956	5748	26.3	200	64.33
17957	5768.5	26.4	200	64.33
17958	5789	26.5	200	64.33
17959	5816	26.6	200	64.33
17960	5840	26.7	200	64.33
17961	5861	26.8	200	64.33
17962	5885	26.9	200	64.33
17963	5910	27	200	64.33
17964	5932.5	27.1	200	64.33
17965	5955	27.2	200	64.33
17966	5977.5	27.3	200	64.33
17967	5997.5	27.4	200	64.33
17968	6000	27.5	200	64.33
18276	0	0	300	64.33
18277	1.5	0.1	300	64.33
18278	37	0.2	300	64.33
18279	71.5	0.3	300	64.33
18280	100.5	0.4	300	64.33
18281	135	0.5	300	64.33
18282	167.5	0.6	300	64.33
18283	203	0.7	300	64.33
18284	234.5	0.8	300	64.33
18285	267	0.9	300	64.33
18286	302.5	1	300	64.33
18287	334.5	1.1	300	64.33
18288	366.5	1.2	300	64.33
18289	402.5	1.3	300	64.33
18290	437	1.4	300	64.33
18291	467	1.5	300	64.33
18292	499.5	1.6	300	64.33

18293	532.5	1.7	300	64.33
18294	565.5	1.8	300	64.33
18295	600	1.9	300	64.33
18296	633.5	2	300	64.33
18297	665	2.1	300	64.33
18298	699.5	2.2	300	64.33
18299	732	2.3	300	64.33
18300	765	2.4	300	64.33
18301	798	2.5	300	64.33
18302	831	2.6	300	64.33
18303	863	2.7	300	64.33
18304	896	2.8	300	64.33
18305	930.5	2.9	300	64.33
18306	962.5	3	300	64.33
18307	996.5	3.1	300	64.33
18308	1028.5	3.2	300	64.33
18309	1060	3.3	300	64.33
18310	1097	3.4	300	64.33
18311	1129.5	3.5	300	64.33
18312	1164	3.6	300	64.33
18313	1196.5	3.7	300	64.33
18314	1229.5	3.8	300	64.33
18315	1262.5	3.9	300	64.33
18316	1294.5	4	300	64.33
18317	1326.5	4.1	300	64.33
18318	1359	4.2	300	64.33
18319	1393	4.3	300	64.33
18320	1429	4.4	300	64.33
18321	1459.5	4.5	300	64.33
18322	1494	4.6	300	64.33
18323	1526	4.7	300	64.33
18324	1559	4.8	300	64.33
18325	1591	4.9	300	64.33
18326	1625	5	300	64.33
18327	1657.5	5.1	300	64.33
18328	1693.5	5.2	300	64.33
18329	1723.5	5.3	300	64.33
18330	1757	5.4	300	64.33
18331	1791.5	5.5	300	64.33
18332	1823	5.6	300	64.33
18333	1855	5.7	300	64.33
18334	1891	5.8	300	64.33

18335	1923.5	5.9	300	64.33
18336	1956.5	6	300	64.33
18337	1987.5	6.1	300	64.33
18338	2022	6.2	300	64.33
18339	2055.5	6.3	300	64.33
18340	2088	6.4	300	64.33
18341	2120.5	6.5	300	64.33
18342	2154.5	6.6	300	64.33
18343	2188.5	6.7	300	64.33
18344	2218.5	6.8	300	64.33
18345	2251	6.9	300	64.33
18346	2286	7	300	64.33
18347	2319.5	7.1	300	64.33
18348	2351.5	7.2	300	64.33
18349	2385.5	7.3	300	64.33
18350	2419.5	7.4	300	64.33
18351	2449	7.5	300	64.33
18352	2484	7.6	300	64.33
18353	2514.5	7.7	300	64.33
18354	2550.5	7.8	300	64.33
18355	2582.5	7.9	300	64.33
18356	2616	8	300	64.33
18357	2649	8.1	300	64.33
18358	2684	8.2	300	64.33
18359	2717	8.3	300	64.33
18360	2748	8.4	300	64.33
18361	2780	8.5	300	64.33
18362	2814.5	8.6	300	64.33
18363	2848.5	8.7	300	64.33
18364	2880	8.8	300	64.33
18365	2913.5	8.9	300	64.33
18366	2948	9	300	64.33
18367	2979	9.1	300	64.33
18368	3013	9.2	300	64.33
18369	3045.5	9.3	300	64.33
18370	3078	9.4	300	64.33
18371	3113	9.5	300	64.33
18372	3144.5	9.6	300	64.33
18373	3177	9.7	300	64.33
18374	3212.5	9.8	300	64.33
18375	3244	9.9	300	64.33
18376	3276.5	10	300	64.33

18377	3309	10.1	300	64.33
18378	3342.5	10.2	300	64.33
18379	3376.5	10.3	300	64.33
18380	3410.5	10.4	300	64.33
18381	3442.5	10.5	300	64.33
18382	3474	10.6	300	64.33
18383	3509	10.7	300	64.33
18384	3542	10.8	300	64.33
18385	3573.5	10.9	300	64.33
18386	3606.5	11	300	64.33
18387	3640	11.1	300	64.33
18388	3673.5	11.2	300	64.33
18389	3707.5	11.3	300	64.33
18390	3739.5	11.4	300	64.33
18391	3771.5	11.5	300	64.33
18392	3804	11.6	300	64.33
18393	3837.5	11.7	300	64.33
18394	3870.5	11.8	300	64.33
18395	3906	11.9	300	64.33
18396	3937.5	12	300	64.33
18397	3970.5	12.1	300	64.33
18398	4004	12.2	300	64.33
18399	4037	12.3	300	64.33
18400	4070.5	12.4	300	64.33
18401	4101.5	12.5	300	64.33
18402	4128	12.6	300	64.33
18403	4170	12.7	300	64.33
18404	4202	12.8	300	64.33
18405	4235	12.9	300	64.33
18406	4267.5	13	300	64.33
18407	4299	13.1	300	64.33
18408	4332	13.2	300	64.33
18409	4363.5	13.3	300	64.33
18410	4392.5	13.4	300	64.33
18411	4431.5	13.5	300	64.33
18412	4465	13.6	300	64.33
18413	4499	13.7	300	64.33
18414	4529.5	13.8	300	64.33
18415	4561.5	13.9	300	64.33
18416	4597	14	300	64.33
18417	4630.5	14.1	300	64.33
18418	4666.5	14.2	300	64.33

18419	4698	14.3	300	64.33
18420	4731	14.4	300	64.33
18421	4763	14.5	300	64.33
18422	4797	14.6	300	64.33
18423	4830.5	14.7	300	64.33
18424	4862	14.8	300	64.33
18425	4894.5	14.9	300	64.33
18426	4927	15	300	64.33
18427	4960.5	15.1	300	64.33
18428	4994	15.2	300	64.33
18429	5026.5	15.3	300	64.33
18430	5060.5	15.4	300	64.33
18431	5093.5	15.5	300	64.33
18432	5126.5	15.6	300	64.33
18433	5156	15.7	300	64.33
18434	5193	15.8	300	64.33
18435	5227	15.9	300	64.33
18436	5258.5	16	300	64.33
18437	5292	16.1	300	64.33
18438	5327	16.2	300	64.33
18439	5359.5	16.3	300	64.33
18440	5391.5	16.4	300	64.33
18441	5423.5	16.5	300	64.33
18442	5458	16.6	300	64.33
18443	5490.5	16.7	300	64.33
18444	5523.5	16.8	300	64.33
18445	5557	16.9	300	64.33
18446	5591	17	300	64.33
18447	5623.5	17.1	300	64.33
18448	5658.5	17.2	300	64.33
18449	5689	17.3	300	64.33
18450	5722.5	17.4	300	64.33
18451	5757	17.5	300	64.33
18452	5788	17.6	300	64.33
18453	5821	17.7	300	64.33
18454	5854.5	17.8	300	64.33
18455	5888.5	17.9	300	64.33
18456	5922	18	300	64.33
18457	5954	18.1	300	64.33
18458	5985.5	18.2	300	64.33
18459	6000	18.3	300	64.33
18671	0	0	400	64.33

18672	1	0.1	400	64.33
18673	42	0.2	400	64.33
18674	80	0.3	400	64.33
18675	123.5	0.4	400	64.33
18676	172.5	0.5	400	64.33
18677	218	0.6	400	64.33
18678	260.5	0.7	400	64.33
18679	303.5	0.8	400	64.33
18680	349.5	0.9	400	64.33
18681	393	1	400	64.33
18682	432	1.1	400	64.33
18683	477.5	1.2	400	64.33
18684	525	1.3	400	64.33
18685	569	1.4	400	64.33
18686	610.5	1.5	400	64.33
18687	656.5	1.6	400	64.33
18688	702.5	1.7	400	64.33
18689	745.5	1.8	400	64.33
18690	788.5	1.9	400	64.33
18691	835	2	400	64.33
18692	878	2.1	400	64.33
18693	923.5	2.2	400	64.33
18694	965.5	2.3	400	64.33
18695	1009.5	2.4	400	64.33
18696	1055	2.5	400	64.33
18697	1100.5	2.6	400	64.33
18698	1145.5	2.7	400	64.33
18699	1188	2.8	400	64.33
18700	1230.5	2.9	400	64.33
18701	1277.5	3	400	64.33
18702	1320.5	3.1	400	64.33
18703	1363	3.2	400	64.33
18704	1409.5	3.3	400	64.33
18705	1452	3.4	400	64.33
18706	1494.5	3.5	400	64.33
18707	1539.5	3.6	400	64.33
18708	1584.5	3.7	400	64.33
18709	1627	3.8	400	64.33
18710	1671	3.9	400	64.33
18711	1716.5	4	400	64.33
18712	1761	4.1	400	64.33
18713	1805.5	4.2	400	64.33

18714	1847.5	4.3	400	64.33
18715	1891.5	4.4	400	64.33
18716	1939.5	4.5	400	64.33
18717	1981.5	4.6	400	64.33
18718	2024.5	4.7	400	64.33
18719	2069	4.8	400	64.33
18720	2112.5	4.9	400	64.33
18721	2158.5	5	400	64.33
18722	2202.5	5.1	400	64.33
18723	2246	5.2	400	64.33
18724	2290.5	5.3	400	64.33
18725	2334	5.4	400	64.33
18726	2374.5	5.5	400	64.33
18727	2421.5	5.6	400	64.33
18728	2466.5	5.7	400	64.33
18729	2509	5.8	400	64.33
18730	2552	5.9	400	64.33
18731	2596.5	6	400	64.33
18732	2642	6.1	400	64.33
18733	2688.5	6.2	400	64.33
18734	2730	6.3	400	64.33
18735	2773.5	6.4	400	64.33
18736	2817.5	6.5	400	64.33
18737	2863	6.6	400	64.33
18738	2905	6.7	400	64.33
18739	2948.5	6.8	400	64.33
18740	2993	6.9	400	64.33
18741	3038.5	7	400	64.33
18742	3081	7.1	400	64.33
18743	3125.5	7.2	400	64.33
18744	3170	7.3	400	64.33
18745	3214	7.4	400	64.33
18746	3258	7.5	400	64.33
18747	3300	7.6	400	64.33
18748	3347	7.7	400	64.33
18749	3389.5	7.8	400	64.33
18750	3432.5	7.9	400	64.33
18751	3477.5	8	400	64.33
18752	3521.5	8.1	400	64.33
18753	3565.5	8.2	400	64.33
18754	3608	8.3	400	64.33
18755	3653	8.4	400	64.33

18756	3698	8.5	400	64.33
18757	3743	8.6	400	64.33
18758	3784.5	8.7	400	64.33
18759	3829.5	8.8	400	64.33
18760	3875	8.9	400	64.33
18761	3919.5	9	400	64.33
18762	3962	9.1	400	64.33
18763	4005.5	9.2	400	64.33
18764	4050.5	9.3	400	64.33
18765	4093.5	9.4	400	64.33
18766	4131	9.5	400	64.33
18767	4183.5	9.6	400	64.33
18768	4225.5	9.7	400	64.33
18769	4271	9.8	400	64.33
18770	4316	9.9	400	64.33
18771	4358.5	10	400	64.33
18772	4397.5	10.1	400	64.33
18773	4447.5	10.2	400	64.33
18774	4490	10.3	400	64.33
18775	4534	10.4	400	64.33
18776	4578.5	10.5	400	64.33
18777	4623.5	10.6	400	64.33
18778	4668.5	10.7	400	64.33
18779	4711.5	10.8	400	64.33
18780	4755	10.9	400	64.33
18781	4801	11	400	64.33
18782	4843	11.1	400	64.33
18783	4887.5	11.2	400	64.33
18784	4932	11.3	400	64.33
18785	4977	11.4	400	64.33
18786	5018.5	11.5	400	64.33
18787	5063	11.6	400	64.33
18788	5107.5	11.7	400	64.33
18789	5152	11.8	400	64.33
18790	5196	11.9	400	64.33
18791	5239.5	12	400	64.33
18792	5286.5	12.1	400	64.33
18793	5329.5	12.2	400	64.33
18794	5371.5	12.3	400	64.33
18795	5418	12.4	400	64.33
18796	5462	12.5	400	64.33
18797	5503.5	12.6	400	64.33

18798	5547	12.7	400	64.33
18799	5592.5	12.8	400	64.33
18800	5638	12.9	400	64.33
18801	5683.5	13	400	64.33
18802	5724.5	13.1	400	64.33
18803	5768	13.2	400	64.33
18804	5814	13.3	400	64.33
18805	5857	13.4	400	64.33
18806	5900	13.5	400	64.33
18807	5945.5	13.6	400	64.33
18808	5988.5	13.7	400	64.33
18809	6001.5	13.8	400	64.33
16308	0	0	500	64.33
16309	42.5	0.1	500	64.33
16310	91	0.2	500	64.33
16311	152	0.3	500	64.33
16312	203	0.4	500	64.33
16313	260.5	0.5	500	64.33
16314	320	0.6	500	64.33
16315	369.5	0.7	500	64.33
16316	427	0.8	500	64.33
16317	479.5	0.9	500	64.33
16318	537.5	1	500	64.33
16319	592	1.1	500	64.33
16320	649.5	1.2	500	64.33
16321	703	1.3	500	64.33
16322	758	1.4	500	64.33
16323	814	1.5	500	64.33
16324	866.5	1.6	500	64.33
16325	922	1.7	500	64.33
16326	978.5	1.8	500	64.33
16327	1031	1.9	500	64.33
16328	1090	2	500	64.33
16329	1144.5	2.1	500	64.33
16330	1200.5	2.2	500	64.33
16331	1254.5	2.3	500	64.33
16332	1311.5	2.4	500	64.33
16333	1365	2.5	500	64.33
16334	1420.5	2.6	500	64.33
16335	1476.5	2.7	500	64.33
16336	1531.5	2.8	500	64.33
16337	1585	2.9	500	64.33

16338	1640	3	500	64.33
16339	1698	3.1	500	64.33
16340	1753	3.2	500	64.33
16341	1805.5	3.3	500	64.33
16342	1862.5	3.4	500	64.33
16343	1918.5	3.5	500	64.33
16344	1969.5	3.6	500	64.33
16345	2025.5	3.7	500	64.33
16346	2081.5	3.8	500	64.33
16347	2136.5	3.9	500	64.33
16348	2191.5	4	500	64.33
16349	2247	4.1	500	64.33
16350	2300	4.2	500	64.33
16351	2359	4.3	500	64.33
16352	2411	4.4	500	64.33
16353	2466.5	4.5	500	64.33
16354	2522	4.6	500	64.33
16355	2580	4.7	500	64.33
16356	2631	4.8	500	64.33
16357	2688.5	4.9	500	64.33
16358	2741.5	5	500	64.33
16359	2798.5	5.1	500	64.33
16360	2853	5.2	500	64.33
16361	2906.5	5.3	500	64.33
16362	2963.5	5.4	500	64.33
16363	3016	5.5	500	64.33
16364	3069.5	5.6	500	64.33
16365	3126.5	5.7	500	64.33
16366	3183	5.8	500	64.33
16367	3236.5	5.9	500	64.33
16368	3289	6	500	64.33
16369	3345.5	6.1	500	64.33
16370	3401.5	6.2	500	64.33
16371	3457	6.3	500	64.33
16372	3515	6.4	500	64.33
16373	3566.5	6.5	500	64.33
16374	3620	6.6	500	64.33
16375	3676	6.7	500	64.33
16376	3733	6.8	500	64.33
16377	3785.5	6.9	500	64.33
16378	3842	7	500	64.33
16379	3898	7.1	500	64.33

16380	3952	7.2	500	64.33
16381	4006	7.3	500	64.33
16382	4064	7.4	500	64.33
16383	4118	7.5	500	64.33
16384	4174	7.6	500	64.33
16385	4226	7.7	500	64.33
16386	4281.5	7.8	500	64.33
16387	4337.5	7.9	500	64.33
16388	4396.5	8	500	64.33
16389	4447.5	8.1	500	64.33
16390	4504	8.2	500	64.33
16391	4559.5	8.3	500	64.33
16392	4613	8.4	500	64.33
16393	4668	8.5	500	64.33
16394	4722	8.6	500	64.33
16395	4779.5	8.7	500	64.33
16396	4834	8.8	500	64.33
16397	4889	8.9	500	64.33
16398	4945	9	500	64.33
16399	5000	9.1	500	64.33
16400	5052	9.2	500	64.33
16401	5107.5	9.3	500	64.33
16402	5165.5	9.4	500	64.33
16403	5218	9.5	500	64.33
16404	5276	9.6	500	64.33
16405	5324.5	9.7	500	64.33
16406	5382	9.8	500	64.33
16407	5440.5	9.9	500	64.33
16408	5493	10	500	64.33
16409	5546	10.1	500	64.33
16410	5605.5	10.2	500	64.33
16411	5661.5	10.3	500	64.33
16412	5715.5	10.4	500	64.33
16413	5768.5	10.5	500	64.33
16414	5826	10.6	500	64.33
16415	5879.5	10.7	500	64.33
16416	5935	10.8	500	64.33
16417	5988	10.9	500	64.33
16418	6000	11	500	64.33
18985	0.5	0	600	64.33
18986	22.5	0.1	600	64.33
18987	82	0.2	600	64.33

18988	150.5	0.3	600	64.33
18989	214.5	0.4	600	64.33
18990	281	0.5	600	64.33
18991	343.5	0.6	600	64.33
18992	417.5	0.7	600	64.33
18993	478	0.8	600	64.33
18994	546	0.9	600	64.33
18995	611.5	1	600	64.33
18996	679.5	1.1	600	64.33
18997	746	1.2	600	64.33
18998	809.5	1.3	600	64.33
18999	875.5	1.4	600	64.33
19000	940.5	1.5	600	64.33
19001	1009	1.6	600	64.33
19002	1076	1.7	600	64.33
19003	1145	1.8	600	64.33
19004	1208	1.9	600	64.33
19005	1277.5	2	600	64.33
19006	1340	2.1	600	64.33
19007	1407.5	2.2	600	64.33
19008	1475	2.3	600	64.33
19009	1541	2.4	600	64.33
19010	1608	2.5	600	64.33
19011	1672	2.6	600	64.33
19012	1737.5	2.7	600	64.33
19013	1803.5	2.8	600	64.33
19014	1868	2.9	600	64.33
19015	1936.5	3	600	64.33
19016	2006.5	3.1	600	64.33
19017	2067.5	3.2	600	64.33
19018	2133	3.3	600	64.33
19019	2202	3.4	600	64.33
19020	2265	3.5	600	64.33
19021	2333.5	3.6	600	64.33
19022	2398.5	3.7	600	64.33
19023	2464.5	3.8	600	64.33
19024	2529	3.9	600	64.33
19025	2598	4	600	64.33
19026	2660.5	4.1	600	64.33
19027	2728.5	4.2	600	64.33
19028	2796.5	4.3	600	64.33
19029	2864.5	4.4	600	64.33

19030	2926.5	4.5	600	64.33
19031	2994.5	4.6	600	64.33
19032	3060	4.7	600	64.33
19033	3126.5	4.8	600	64.33
19034	3189	4.9	600	64.33
19035	3256	5	600	64.33
19036	3325	5.1	600	64.33
19037	3390.5	5.2	600	64.33
19038	3455.5	5.3	600	64.33
19039	3520.5	5.4	600	64.33
19040	3589	5.5	600	64.33
19041	3655	5.6	600	64.33
19042	3719.5	5.7	600	64.33
19043	3787	5.8	600	64.33
19044	3853	5.9	600	64.33
19045	3922	6	600	64.33
19046	3985	6.1	600	64.33
19047	4050	6.2	600	64.33
19048	4117	6.3	600	64.33
19049	4183.5	6.4	600	64.33
19050	4247	6.5	600	64.33
19051	4316.5	6.6	600	64.33
19052	4382.5	6.7	600	64.33
19053	4447	6.8	600	64.33
19054	4512.5	6.9	600	64.33
19055	4580	7	600	64.33
19056	4644.5	7.1	600	64.33
19057	4713	7.2	600	64.33
19058	4777	7.3	600	64.33
19059	4842	7.4	600	64.33
19060	4910.5	7.5	600	64.33
19061	4977	7.6	600	64.33
19062	5039.5	7.7	600	64.33
19063	5106.5	7.8	600	64.33
19064	5173	7.9	600	64.33
19065	5239	8	600	64.33
19066	5307	8.1	600	64.33
19067	5370.5	8.2	600	64.33
19068	5439.5	8.3	600	64.33
19069	5505	8.4	600	64.33
19070	5570	8.5	600	64.33
19071	5638	8.6	600	64.33

19072	5705	8.7	600	64.33
19073	5772.5	8.8	600	64.33
19074	5835	8.9	600	64.33
19075	5899	9	600	64.33
19076	5969	9.1	600	64.33
19077	6001.5	9.2	600	64.33
19211	0	0	700	64.33
19212	0.5	0.1	700	64.33
19213	23.5	0.2	700	64.33
19214	83.5	0.3	700	64.33
19215	160	0.4	700	64.33
19216	233	0.5	700	64.33
19217	318	0.6	700	64.33
19218	395	0.7	700	64.33
19219	468.5	0.8	700	64.33
19220	545.5	0.9	700	64.33
19221	625	1	700	64.33
19222	704.5	1.1	700	64.33
19223	778.5	1.2	700	64.33
19224	854	1.3	700	64.33
19225	934	1.4	700	64.33
19226	1010.5	1.5	700	64.33
19227	1087	1.6	700	64.33
19228	1165.5	1.7	700	64.33
19229	1242.5	1.8	700	64.33
19230	1322	1.9	700	64.33
19231	1397.5	2	700	64.33
19232	1472	2.1	700	64.33
19233	1549	2.2	700	64.33
19234	1629	2.3	700	64.33
19235	1708	2.4	700	64.33
19236	1781	2.5	700	64.33
19237	1860	2.6	700	64.33
19238	1944.5	2.7	700	64.33
19239	2015.5	2.8	700	64.33
19240	2090	2.9	700	64.33
19241	2173.5	3	700	64.33
19242	2250.5	3.1	700	64.33
19243	2323	3.2	700	64.33
19244	2398.5	3.3	700	64.33
19245	2481.5	3.4	700	64.33
19246	2553.5	3.5	700	64.33

19247	2632.5	3.6	700	64.33
19248	2706.5	3.7	700	64.33
19249	2785	3.8	700	64.33
19250	2859.5	3.9	700	64.33
19251	2939.5	4	700	64.33
19252	3013.5	4.1	700	64.33
19253	3092.5	4.2	700	64.33
19254	3176.5	4.3	700	64.33
19255	3249	4.4	700	64.33
19256	3324.5	4.5	700	64.33
19257	3406	4.6	700	64.33
19258	3480	4.7	700	64.33
19259	3558	4.8	700	64.33
19260	3632.5	4.9	700	64.33
19261	3710	5	700	64.33
19262	3791.5	5.1	700	64.33
19263	3863	5.2	700	64.33
19264	3940	5.3	700	64.33
19265	4018.5	5.4	700	64.33
19266	4095	5.5	700	64.33
19267	4170.5	5.6	700	64.33
19268	4247.5	5.7	700	64.33
19269	4324.5	5.8	700	64.33
19270	4398	5.9	700	64.33
19271	4482	6	700	64.33
19272	4554.5	6.1	700	64.33
19273	4632.5	6.2	700	64.33
19274	4710.5	6.3	700	64.33
19275	4789	6.4	700	64.33
19276	4863.5	6.5	700	64.33
19277	4943.5	6.6	700	64.33
19278	5019.5	6.7	700	64.33
19279	5103	6.8	700	64.33
19280	5175	6.9	700	64.33
19281	5252	7	700	64.33
19282	5329	7.1	700	64.33
19283	5410	7.2	700	64.33
19284	5484	7.3	700	64.33
19285	5563	7.4	700	64.33
19286	5642.5	7.5	700	64.33
19287	5719	7.6	700	64.33
19288	5792.5	7.7	700	64.33

19289	5871.5	7.8	700	64.33
19290	5944.5	7.9	700	64.33
19291	6000	8	700	64.33
19403	0	0	800	64.33
19404	1.5	0.1	800	64.33
19405	38	0.2	800	64.33
19406	114.5	0.3	800	64.33
19407	208.5	0.4	800	64.33
19408	295.5	0.5	800	64.33
19409	385	0.6	800	64.33
19410	471	0.7	800	64.33
19411	560	0.8	800	64.33
19412	654	0.9	800	64.33
19413	735.5	1	800	64.33
19414	824	1.1	800	64.33
19415	914	1.2	800	64.33
19416	1003.5	1.3	800	64.33
19417	1092	1.4	800	64.33
19418	1179.5	1.5	800	64.33
19419	1267	1.6	800	64.33
19420	1353.5	1.7	800	64.33
19421	1443.5	1.8	800	64.33
19422	1528	1.9	800	64.33
19423	1615.5	2	800	64.33
19424	1709.5	2.1	800	64.33
19425	1794.5	2.2	800	64.33
19426	1882	2.3	800	64.33
19427	1972	2.4	800	64.33
19428	2061	2.5	800	64.33
19429	2155	2.6	800	64.33
19430	2240.5	2.7	800	64.33
19431	2326	2.8	800	64.33
19432	2420	2.9	800	64.33
19433	2507	3	800	64.33
19434	2585.5	3.1	800	64.33
19435	2679.5	3.2	800	64.33
19436	2763.5	3.3	800	64.33
19437	2857.5	3.4	800	64.33
19438	2942.5	3.5	800	64.33
19439	3028.5	3.6	800	64.33
19440	3119.5	3.7	800	64.33
19441	3206.5	3.8	800	64.33

19442	3293.5	3.9	800	64.33
19443	3379	4	800	64.33
19444	3465.5	4.1	800	64.33
19445	3553.5	4.2	800	64.33
19446	3645	4.3	800	64.33
19447	3732.5	4.4	800	64.33
19448	3821.5	4.5	800	64.33
19449	3907.5	4.6	800	64.33
19450	4000	4.7	800	64.33
19451	4087.5	4.8	800	64.33
19452	4172.5	4.9	800	64.33
19453	4262.5	5	800	64.33
19454	4349.5	5.1	800	64.33
19455	4441	5.2	800	64.33
19456	4528	5.3	800	64.33
19457	4616.5	5.4	800	64.33
19458	4702	5.5	800	64.33
19459	4796	5.6	800	64.33
19460	4878.5	5.7	800	64.33
19461	4970.5	5.8	800	64.33
19462	5057	5.9	800	64.33
19463	5144.5	6	800	64.33
19464	5231.5	6.1	800	64.33
19465	5323	6.2	800	64.33
19466	5406	6.3	800	64.33
19467	5498	6.4	800	64.33
19468	5583.5	6.5	800	64.33
19469	5672	6.6	800	64.33
19470	5757	6.7	800	64.33
19471	5847.5	6.8	800	64.33
19472	5938.5	6.9	800	64.33
19473	6000.5	7	800	64.33
19568	0	0	900	64.33
19569	-1	0.1	900	64.33
19570	1.5	0.2	900	64.33
19571	46.5	0.3	900	64.33
19572	127.5	0.4	900	64.33
19573	232.5	0.5	900	64.33
19574	335	0.6	900	64.33
19575	432	0.7	900	64.33
19576	531.5	0.8	900	64.33
19577	633	0.9	900	64.33

19578	732	1	900	64.33
19579	832.5	1.1	900	64.33
19580	930.5	1.2	900	64.33
19581	1028.5	1.3	900	64.33
19582	1129.5	1.4	900	64.33
19583	1233.5	1.5	900	64.33
19584	1328.5	1.6	900	64.33
19585	1429	1.7	900	64.33
19586	1530.5	1.8	900	64.33
19587	1628	1.9	900	64.33
19588	1729.5	2	900	64.33
19589	1823	2.1	900	64.33
19590	1927.5	2.2	900	64.33
19591	2025.5	2.3	900	64.33
19592	2122	2.4	900	64.33
19593	2226	2.5	900	64.33
19594	2321.5	2.6	900	64.33
19595	2423.5	2.7	900	64.33
19596	2523.5	2.8	900	64.33
19597	2621.5	2.9	900	64.33
19598	2717.5	3	900	64.33
19599	2819	3.1	900	64.33
19600	2915.5	3.2	900	64.33
19601	3021	3.3	900	64.33
19602	3123.5	3.4	900	64.33
19603	3218.5	3.5	900	64.33
19604	3316	3.6	900	64.33
19605	3414.5	3.7	900	64.33
19606	3517.5	3.8	900	64.33
19607	3618	3.9	900	64.33
19608	3714	4	900	64.33
19609	3812.5	4.1	900	64.33
19610	3914.5	4.2	900	64.33
19611	4013	4.3	900	64.33
19612	4108	4.4	900	64.33
19613	4209.5	4.5	900	64.33
19614	4311.5	4.6	900	64.33
19615	4404	4.7	900	64.33
19616	4506	4.8	900	64.33
19617	4605.5	4.9	900	64.33
19618	4705.5	5	900	64.33
19619	4806	5.1	900	64.33

19620	4905.5	5.2	900	64.33
19621	5002.5	5.3	900	64.33
19622	5106	5.4	900	64.33
19623	5204	5.5	900	64.33
19624	5304.5	5.6	900	64.33
19625	5402	5.7	900	64.33
19626	5504	5.8	900	64.33
19627	5602.5	5.9	900	64.33
19628	5698.5	6	900	64.33
19629	5797	6.1	900	64.33
19630	5895	6.2	900	64.33
19631	5997	6.3	900	64.33
19632	6003.5	6.4	900	64.33
19633	6004	6.5	900	64.33
19732	0.5	0	1000	64.33
19733	1	0.1	1000	64.33
19734	46	0.2	1000	64.33
19735	136	0.3	1000	64.33
19736	243.5	0.4	1000	64.33
19737	356.5	0.5	1000	64.33
19738	464.5	0.6	1000	64.33
19739	581	0.7	1000	64.33
19740	693.5	0.8	1000	64.33
19741	795.5	0.9	1000	64.33
19742	910	1	1000	64.33
19743	1023	1.1	1000	64.33
19744	1131.5	1.2	1000	64.33
19745	1242.5	1.3	1000	64.33
19746	1349.5	1.4	1000	64.33
19747	1468	1.5	1000	64.33
19748	1571	1.6	1000	64.33
19749	1687	1.7	1000	64.33
19750	1794.5	1.8	1000	64.33
19751	1904.5	1.9	1000	64.33
19752	2018.5	2	1000	64.33
19753	2125.5	2.1	1000	64.33
19754	2239	2.2	1000	64.33
19755	2349	2.3	1000	64.33
19756	2461	2.4	1000	64.33
19757	2570	2.5	1000	64.33
19758	2677	2.6	1000	64.33
19759	2787	2.7	1000	64.33

19760	2902	2.8	1000	64.33
19761	3006.5	2.9	1000	64.33
19762	3123.5	3	1000	64.33
19763	3232	3.1	1000	64.33
19764	3341.5	3.2	1000	64.33
19765	3449	3.3	1000	64.33
19766	3558.5	3.4	1000	64.33
19767	3666.5	3.5	1000	64.33
19768	3786.5	3.6	1000	64.33
19769	3888.5	3.7	1000	64.33
19770	4002.5	3.8	1000	64.33
19771	4109	3.9	1000	64.33
19772	4219.5	4	1000	64.33
19773	4331	4.1	1000	64.33
19774	4440	4.2	1000	64.33
19775	4549.5	4.3	1000	64.33
19776	4659	4.4	1000	64.33
19777	4772.5	4.5	1000	64.33
19778	4883.5	4.6	1000	64.33
19779	4999	4.7	1000	64.33
19780	5109.5	4.8	1000	64.33
19781	5220	4.9	1000	64.33
19782	5324	5	1000	64.33
19783	5439.5	5.1	1000	64.33
19784	5543.5	5.2	1000	64.33
19785	5659	5.3	1000	64.33
19786	5771.5	5.4	1000	64.33
19787	5876.5	5.5	1000	64.33
19788	5992.5	5.6	1000	64.33
19789	6002	5.7	1000	64.33
19871	0	0	2000	64.33
19872	1	0.1	2000	64.33
19873	22.5	0.2	2000	64.33
19874	103	0.3	2000	64.33
19875	228.5	0.4	2000	64.33
19876	398	0.5	2000	64.33
19877	623.5	0.6	2000	64.33
19878	852.5	0.7	2000	64.33
19879	1058	0.8	2000	64.33
19880	1293.5	0.9	2000	64.33
19881	1494.5	1	2000	64.33
19882	1723.5	1.1	2000	64.33

19883	1954.5	1.2	2000	64.33
19884	2159	1.3	2000	64.33
19885	2388	1.4	2000	64.33
19886	2622	1.5	2000	64.33
19887	2818.5	1.6	2000	64.33
19888	3056.5	1.7	2000	64.33
19889	3290.5	1.8	2000	64.33
19890	3494	1.9	2000	64.33
19891	3702	2	2000	64.33
19892	3937.5	2.1	2000	64.33
19893	4154.5	2.2	2000	64.33
19894	4371	2.3	2000	64.33
19895	4586	2.4	2000	64.33
19896	4805.5	2.5	2000	64.33
19897	5031	2.6	2000	64.33
19898	5256.5	2.7	2000	64.33
19899	5465	2.8	2000	64.33
19900	5699.5	2.9	2000	64.33
19901	5910	3	2000	64.33
19902	6008	3.1	2000	64.33
19960	0.5	0	3000	64.33
19961	1.5	0.1	3000	64.33
19962	33	0.2	3000	64.33
19963	113	0.3	3000	64.33
19964	252.5	0.4	3000	64.33
19965	433	0.5	3000	64.33
19966	653.5	0.6	3000	64.33
19967	940	0.7	3000	64.33
19968	1257	0.8	3000	64.33
19969	1623.5	0.9	3000	64.33
19970	1906	1	3000	64.33
19971	2282.5	1.1	3000	64.33
19972	2598	1.2	3000	64.33
19973	2904.5	1.3	3000	64.33
19974	3240	1.4	3000	64.33
19975	3569	1.5	3000	64.33
19976	3977.5	1.6	3000	64.33
19977	4246	1.7	3000	64.33
19978	4580	1.8	3000	64.33
19979	4893.5	1.9	3000	64.33
19980	5262	2	3000	64.33
19981	5567	2.1	3000	64.33

19982	5891.5	2.2	3000	64.33
19983	6004	2.3	3000	64.33
20032	0	0	4000	64.33
20033	0.5	0.1	4000	64.33
20034	1.5	0.2	4000	64.33
20035	52	0.3	4000	64.33
20036	145	0.4	4000	64.33
20037	302	0.5	4000	64.33
20038	484	0.6	4000	64.33
20039	736.5	0.7	4000	64.33
20040	1015.5	0.8	4000	64.33
20041	1336	0.9	4000	64.33
20042	1765.5	1	4000	64.33
20043	2129.5	1.1	4000	64.33
20044	2607	1.2	4000	64.33
20045	3023	1.3	4000	64.33
20046	3504	1.4	4000	64.33
20047	3912.5	1.5	4000	64.33
20048	4353	1.6	4000	64.33
20049	4802	1.7	4000	64.33
20050	5231.5	1.8	4000	64.33
20051	5705.5	1.9	4000	64.33
20052	6019	2	4000	64.33
20105	0	0	100	130.71
20106	1	0.1	100	130.71
20107	10.5	0.2	100	130.71
20108	19.5	0.3	100	130.71
20109	29.5	0.4	100	130.71
20110	39	0.5	100	130.71
20111	49.5	0.6	100	130.71
20112	60.5	0.7	100	130.71
20113	70.5	0.8	100	130.71
20114	80	0.9	100	130.71
20115	90.5	1	100	130.71
20116	104.5	1.1	100	130.71
20117	119	1.2	100	130.71
20118	126	1.3	100	130.71
20119	135	1.4	100	130.71
20120	139.5	1.5	100	130.71
20121	153.5	1.6	100	130.71
20122	169	1.7	100	130.71
20123	177.5	1.8	100	130.71

20124	191.5	1.9	100	130.71
20125	203	2	100	130.71
20126	216	2.1	100	130.71
20127	230.5	2.2	100	130.71
20128	236.5	2.3	100	130.71
20129	249	2.4	100	130.71
20130	260.5	2.5	100	130.71
20131	273.5	2.6	100	130.71
20132	284	2.7	100	130.71
20133	295.5	2.8	100	130.71
20134	306	2.9	100	130.71
20135	318.5	3	100	130.71
20136	328	3.1	100	130.71
20137	339	3.2	100	130.71
20138	349	3.3	100	130.71
20139	361	3.4	100	130.71
20140	372.5	3.5	100	130.71
20141	383.5	3.6	100	130.71
20142	395	3.7	100	130.71
20143	402.5	3.8	100	130.71
20144	413	3.9	100	130.71
20145	421.5	4	100	130.71
20146	426.5	4.1	100	130.71
20147	443.5	4.2	100	130.71
20148	457	4.3	100	130.71
20149	468	4.4	100	130.71
20150	477	4.5	100	130.71
20151	485	4.6	100	130.71
20152	498.5	4.7	100	130.71
20153	511.5	4.8	100	130.71
20154	525.5	4.9	100	130.71
20155	535	5	100	130.71
20156	546.5	5.1	100	130.71
20157	559	5.2	100	130.71
20158	571	5.3	100	130.71
20159	581	5.4	100	130.71
20160	593	5.5	100	130.71
20161	604.5	5.6	100	130.71
20162	615	5.7	100	130.71
20163	626	5.8	100	130.71
20164	637	5.9	100	130.71
20165	648	6	100	130.71

20166	657.5	6.1	100	130.71
20167	670	6.2	100	130.71
20168	676.5	6.3	100	130.71
20169	690	6.4	100	130.71
20170	699	6.5	100	130.71
20171	711.5	6.6	100	130.71
20172	723	6.7	100	130.71
20173	734	6.8	100	130.71
20174	745.5	6.9	100	130.71
20175	754	7	100	130.71
20176	766	7.1	100	130.71
20177	777.5	7.2	100	130.71
20178	789.5	7.3	100	130.71
20179	800.5	7.4	100	130.71
20180	812	7.5	100	130.71
20181	825	7.6	100	130.71
20182	835	7.7	100	130.71
20183	846.5	7.8	100	130.71
20184	857.5	7.9	100	130.71
20185	869	8	100	130.71
20186	878.5	8.1	100	130.71
20187	890	8.2	100	130.71
20188	902	8.3	100	130.71
20189	911.5	8.4	100	130.71
20190	923	8.5	100	130.71
20191	935.5	8.6	100	130.71
20192	941.5	8.7	100	130.71
20193	955.5	8.8	100	130.71
20194	966.5	8.9	100	130.71
20195	977	9	100	130.71
20196	989.5	9.1	100	130.71
20197	1000.5	9.2	100	130.71
20198	1010.5	9.3	100	130.71
20199	1022.5	9.4	100	130.71
20200	1034	9.5	100	130.71
20201	1044	9.6	100	130.71
20202	1055.5	9.7	100	130.71
20203	1066.5	9.8	100	130.71
20204	1078.5	9.9	100	130.71
20205	1089	10	100	130.71
20206	1100.5	10.1	100	130.71
20207	1112	10.2	100	130.71

20208	1123	10.3	100	130.71
20209	1134.5	10.4	100	130.71
20210	1144	10.5	100	130.71
20211	1155	10.6	100	130.71
20212	1165.5	10.7	100	130.71
20213	1177	10.8	100	130.71
20214	1186.5	10.9	100	130.71
20215	1198	11	100	130.71
20216	1209	11.1	100	130.71
20217	1221	11.2	100	130.71
20218	1232	11.3	100	130.71
20219	1242.5	11.4	100	130.71
20220	1254	11.5	100	130.71
20221	1265	11.6	100	130.71
20222	1275.5	11.7	100	130.71
20223	1286.5	11.8	100	130.71
20224	1297.5	11.9	100	130.71
20225	1309.5	12	100	130.71
20226	1320.5	12.1	100	130.71
20227	1331.5	12.2	100	130.71
20228	1342.5	12.3	100	130.71
20229	1354	12.4	100	130.71
20230	1364.5	12.5	100	130.71
20231	1376	12.6	100	130.71
20232	1386.5	12.7	100	130.71
20233	1397	12.8	100	130.71
20234	1408.5	12.9	100	130.71
20235	1418.5	13	100	130.71
20236	1429.5	13.1	100	130.71
20237	1441	13.2	100	130.71
20238	1452	13.3	100	130.71
20239	1462.5	13.4	100	130.71
20240	1472.5	13.5	100	130.71
20241	1485.5	13.6	100	130.71
20242	1496.5	13.7	100	130.71
20243	1507.5	13.8	100	130.71
20244	1518	13.9	100	130.71
20245	1529	14	100	130.71
20246	1540.5	14.1	100	130.71
20247	1551.5	14.2	100	130.71
20248	1562.5	14.3	100	130.71
20249	1573.5	14.4	100	130.71

20250	1584.5	14.5	100	130.71
20251	1595.5	14.6	100	130.71
20252	1608	14.7	100	130.71
20253	1618.5	14.8	100	130.71
20254	1629	14.9	100	130.71
20255	1640.5	15	100	130.71
20256	1651	15.1	100	130.71
20257	1662	15.2	100	130.71
20258	1672	15.3	100	130.71
20259	1682.5	15.4	100	130.71
20260	1694	15.5	100	130.71
20261	1705	15.6	100	130.71
20262	1715.5	15.7	100	130.71
20263	1726.5	15.8	100	130.71
20264	1738	15.9	100	130.71
20265	1749.5	16	100	130.71
20266	1760.5	16.1	100	130.71
20267	1771.5	16.2	100	130.71
20268	1783	16.3	100	130.71
20269	1794	16.4	100	130.71
20270	1805.5	16.5	100	130.71
20271	1815.5	16.6	100	130.71
20272	1827	16.7	100	130.71
20273	1838.5	16.8	100	130.71
20274	1850	16.9	100	130.71
20275	1861	17	100	130.71
20276	1871.5	17.1	100	130.71
20277	1882.5	17.2	100	130.71
20278	1893	17.3	100	130.71
20279	1903.5	17.4	100	130.71
20280	1915	17.5	100	130.71
20281	1925.5	17.6	100	130.71
20282	1935	17.7	100	130.71
20283	1947	17.8	100	130.71
20284	1958.5	17.9	100	130.71
20285	1969	18	100	130.71
20286	1980	18.1	100	130.71
20287	1992.5	18.2	100	130.71
20288	2003	18.3	100	130.71
20289	2013.5	18.4	100	130.71
20290	2025	18.5	100	130.71
20291	2036.5	18.6	100	130.71

20292	2047	18.7	100	130.71
20293	2058.5	18.8	100	130.71
20294	2068.5	18.9	100	130.71
20295	2080	19	100	130.71
20296	2091.5	19.1	100	130.71
20297	2102.5	19.2	100	130.71
20298	2113.5	19.3	100	130.71
20299	2124.5	19.4	100	130.71
20300	2135.5	19.5	100	130.71
20301	2146.5	19.6	100	130.71
20302	2157	19.7	100	130.71
20303	2168	19.8	100	130.71
20304	2177.5	19.9	100	130.71
20305	2188.5	20	100	130.71
20306	2199.5	20.1	100	130.71
20307	2210.5	20.2	100	130.71
20308	2222.5	20.3	100	130.71
20309	2233.5	20.4	100	130.71
20310	2243.5	20.5	100	130.71
20311	2255	20.6	100	130.71
20312	2267	20.7	100	130.71
20313	2278	20.8	100	130.71
20314	2288.5	20.9	100	130.71
20315	2298.5	21	100	130.71
20316	2309	21.1	100	130.71
20317	2322	21.2	100	130.71
20318	2331	21.3	100	130.71
20319	2343	21.4	100	130.71
20320	2355	21.5	100	130.71
20321	2365	21.6	100	130.71
20322	2377	21.7	100	130.71
20323	2388	21.8	100	130.71
20324	2399	21.9	100	130.71
20325	2410	22	100	130.71
20326	2421	22.1	100	130.71
20327	2431.5	22.2	100	130.71
20328	2442	22.3	100	130.71
20329	2453.5	22.4	100	130.71
20330	2463	22.5	100	130.71
20331	2471.5	22.6	100	130.71
20332	2486	22.7	100	130.71
20333	2495.5	22.8	100	130.71

20334	2507	22.9	100	130.71
20335	2518.5	23	100	130.71
20336	2529	23.1	100	130.71
20337	2540.5	23.2	100	130.71
20338	2551	23.3	100	130.71
20339	2560	23.4	100	130.71
20340	2573	23.5	100	130.71
20341	2584.5	23.6	100	130.71
20342	2596	23.7	100	130.71
20343	2607	23.8	100	130.71
20344	2619	23.9	100	130.71
20345	2630.5	24	100	130.71
20346	2641.5	24.1	100	130.71
20347	2652.5	24.2	100	130.71
20348	2663.5	24.3	100	130.71
20349	2674.5	24.4	100	130.71
20350	2683	24.5	100	130.71
20351	2693.5	24.6	100	130.71
20352	2704	24.7	100	130.71
20353	2713.5	24.8	100	130.71
20354	2725.5	24.9	100	130.71
20355	2737	25	100	130.71
20356	2749.5	25.1	100	130.71
20357	2758	25.2	100	130.71
20358	2772	25.3	100	130.71
20359	2781.5	25.4	100	130.71
20360	2792.5	25.5	100	130.71
20361	2803	25.6	100	130.71
20362	2816	25.7	100	130.71
20363	2827	25.8	100	130.71
20364	2839	25.9	100	130.71
20365	2850	26	100	130.71
20366	2861	26.1	100	130.71
20367	2873	26.2	100	130.71
20368	2883.5	26.3	100	130.71
20369	2894.5	26.4	100	130.71
20370	2905.5	26.5	100	130.71
20371	2915.5	26.6	100	130.71
20372	2926	26.7	100	130.71
20373	2937.5	26.8	100	130.71
20374	2947.5	26.9	100	130.71
20375	2957	27	100	130.71

20376	2967	27.1	100	130.71
20377	2978	27.2	100	130.71
20378	2990	27.3	100	130.71
20379	2999.5	27.4	100	130.71
20380	3010.5	27.5	100	130.71
20381	3024	27.6	100	130.71
20382	3035	27.7	100	130.71
20383	3047	27.8	100	130.71
20384	3058.5	27.9	100	130.71
20385	3068.5	28	100	130.71
20386	3080	28.1	100	130.71
20387	3090.5	28.2	100	130.71
20388	3104	28.3	100	130.71
20389	3114.5	28.4	100	130.71
20390	3125	28.5	100	130.71
20391	3137	28.6	100	130.71
20392	3148	28.7	100	130.71
20393	3157.5	28.8	100	130.71
20394	3170	28.9	100	130.71
20395	3178	29	100	130.71
20396	3190	29.1	100	130.71
20397	3201.5	29.2	100	130.71
20398	3212.5	29.3	100	130.71
20399	3222.5	29.4	100	130.71
20400	3234.5	29.5	100	130.71
20401	3245	29.6	100	130.71
20402	3256.5	29.7	100	130.71
20403	3266.5	29.8	100	130.71
20404	3277.5	29.9	100	130.71
20405	3287.5	30	100	130.71
20406	3297.5	30.1	100	130.71
20407	3309.5	30.2	100	130.71
20408	3322	30.3	100	130.71
20409	3331.5	30.4	100	130.71
20410	3343.5	30.5	100	130.71
20411	3354.5	30.6	100	130.71
20412	3367.5	30.7	100	130.71
20413	3379.5	30.8	100	130.71
20414	3389.5	30.9	100	130.71
20415	3401	31	100	130.71
20416	3410	31.1	100	130.71
20417	3421.5	31.2	100	130.71

20418	3432.5	31.3	100	130.71
20419	3443.5	31.4	100	130.71
20420	3454.5	31.5	100	130.71
20421	3465	31.6	100	130.71
20422	3475.5	31.7	100	130.71
20423	3488.5	31.8	100	130.71
20424	3497.5	31.9	100	130.71
20425	3509.5	32	100	130.71
20426	3518	32.1	100	130.71
20427	3529	32.2	100	130.71
20428	3540.5	32.3	100	130.71
20429	3552	32.4	100	130.71
20430	3564	32.5	100	130.71
20431	3576.5	32.6	100	130.71
20432	3586	32.7	100	130.71
20433	3596.5	32.8	100	130.71
20434	3609	32.9	100	130.71
20435	3619.5	33	100	130.71
20436	3632.5	33.1	100	130.71
20437	3643.5	33.2	100	130.71
20438	3653.5	33.3	100	130.71
20439	3664.5	33.4	100	130.71
20440	3675	33.5	100	130.71
20441	3686	33.6	100	130.71
20442	3696	33.7	100	130.71
20443	3707.5	33.8	100	130.71
20444	3718.5	33.9	100	130.71
20445	3729	34	100	130.71
20446	3740	34.1	100	130.71
20447	3750.5	34.2	100	130.71
20448	3761	34.3	100	130.71
20449	3772	34.4	100	130.71
20450	3782.5	34.5	100	130.71
20451	3793	34.6	100	130.71
20452	3804	34.7	100	130.71
20453	3816	34.8	100	130.71
20454	3828	34.9	100	130.71
20455	3838.5	35	100	130.71
20456	3851	35.1	100	130.71
20457	3863.5	35.2	100	130.71
20458	3873.5	35.3	100	130.71
20459	3884.5	35.4	100	130.71

20460	3895.5	35.5	100	130.71
20461	3906.5	35.6	100	130.71
20462	3917	35.7	100	130.71
20463	3927.5	35.8	100	130.71
20464	3938	35.9	100	130.71
20465	3950.5	36	100	130.71
20466	3961.5	36.1	100	130.71
20467	3971	36.2	100	130.71
20468	3982.5	36.3	100	130.71
20469	3992	36.4	100	130.71
20470	4003	36.5	100	130.71
20471	4013.5	36.6	100	130.71
20472	4023.5	36.7	100	130.71
20473	4036	36.8	100	130.71
20474	4046.5	36.9	100	130.71
20475	4060	37	100	130.71
20476	4070.5	37.1	100	130.71
20477	4082	37.2	100	130.71
20478	4093.5	37.3	100	130.71
20479	4103.5	37.4	100	130.71
20480	4114.5	37.5	100	130.71
20481	4126.5	37.6	100	130.71
20482	4137.5	37.7	100	130.71
20483	4148.5	37.8	100	130.71
20484	4159.5	37.9	100	130.71
20485	4170.5	38	100	130.71
20486	4181	38.1	100	130.71
20487	4191	38.2	100	130.71
20488	4202	38.3	100	130.71
20489	4214	38.4	100	130.71
20490	4225	38.5	100	130.71
20491	4236.5	38.6	100	130.71
20492	4247.5	38.7	100	130.71
20493	4257.5	38.8	100	130.71
20494	4267	38.9	100	130.71
20495	4278.5	39	100	130.71
20496	4288.5	39.1	100	130.71
20497	4300.5	39.2	100	130.71
20498	4311	39.3	100	130.71
20499	4321	39.4	100	130.71
20500	4334.5	39.5	100	130.71
20501	4344.5	39.6	100	130.71

20502	4355.5	39.7	100	130.71
20503	4368	39.8	100	130.71
20504	4379.5	39.9	100	130.71
20505	4391	40	100	130.71
20506	4401	40.1	100	130.71
20507	4413	40.2	100	130.71
20508	4423.5	40.3	100	130.71
20509	4434.5	40.4	100	130.71
20510	4444.5	40.5	100	130.71
20511	4455.5	40.6	100	130.71
20512	4468	40.7	100	130.71
20513	4477.5	40.8	100	130.71
20514	4489	40.9	100	130.71
20515	4500	41	100	130.71
20516	4510.5	41.1	100	130.71
20517	4521.5	41.2	100	130.71
20518	4531.5	41.3	100	130.71
20519	4544	41.4	100	130.71
20520	4555	41.5	100	130.71
20521	4566.5	41.6	100	130.71
20522	4577.5	41.7	100	130.71
20523	4588	41.8	100	130.71
20524	4599	41.9	100	130.71
20525	4611.5	42	100	130.71
20526	4622	42.1	100	130.71
20527	4633	42.2	100	130.71
20528	4645	42.3	100	130.71
20529	4656	42.4	100	130.71
20530	4666.5	42.5	100	130.71
20531	4677	42.6	100	130.71
20532	4687.5	42.7	100	130.71
20533	4698.5	42.8	100	130.71
20534	4710	42.9	100	130.71
20535	4719.5	43	100	130.71
20536	4731	43.1	100	130.71
20537	4742	43.2	100	130.71
20538	4754	43.3	100	130.71
20539	4764.5	43.4	100	130.71
20540	4776	43.5	100	130.71
20541	4786.5	43.6	100	130.71
20542	4798	43.7	100	130.71
20543	4808	43.8	100	130.71

20544	4819	43.9	100	130.71
20545	4830	44	100	130.71
20546	4842.5	44.1	100	130.71
20547	4853	44.2	100	130.71
20548	4864	44.3	100	130.71
20549	4875.5	44.4	100	130.71
20550	4886.5	44.5	100	130.71
20551	4897	44.6	100	130.71
20552	4909.5	44.7	100	130.71
20553	4918	44.8	100	130.71
20554	4929	44.9	100	130.71
20555	4941	45	100	130.71
20556	4953	45.1	100	130.71
20557	4963.5	45.2	100	130.71
20558	4974	45.3	100	130.71
20559	4984.5	45.4	100	130.71
20560	4997	45.5	100	130.71
20561	5007.5	45.6	100	130.71
20562	5017.5	45.7	100	130.71
20563	5028.5	45.8	100	130.71
20564	5040.5	45.9	100	130.71
20565	5052	46	100	130.71
20566	5062.5	46.1	100	130.71
20567	5074.5	46.2	100	130.71
20568	5084	46.3	100	130.71
20569	5096	46.4	100	130.71
20570	5107	46.5	100	130.71
20571	5118	46.6	100	130.71
20572	5129	46.7	100	130.71
20573	5139.5	46.8	100	130.71
20574	5150.5	46.9	100	130.71
20575	5160.5	47	100	130.71
20576	5170.5	47.1	100	130.71
20577	5183.5	47.2	100	130.71
20578	5195	47.3	100	130.71
20579	5206	47.4	100	130.71
20580	5214.5	47.5	100	130.71
20581	5227.5	47.6	100	130.71
20582	5238.5	47.7	100	130.71
20583	5249.5	47.8	100	130.71
20584	5260	47.9	100	130.71
20585	5271.5	48	100	130.71

20586	5283	48.1	100	130.71
20587	5294	48.2	100	130.71
20588	5305	48.3	100	130.71
20589	5315.5	48.4	100	130.71
20590	5326	48.5	100	130.71
20591	5336.5	48.6	100	130.71
20592	5349	48.7	100	130.71
20593	5360.5	48.8	100	130.71
20594	5371	48.9	100	130.71
20595	5382	49	100	130.71
20596	5392.5	49.1	100	130.71
20597	5401.5	49.2	100	130.71
20598	5414.5	49.3	100	130.71
20599	5426.5	49.4	100	130.71
20600	5437	49.5	100	130.71
20601	5448	49.6	100	130.71
20602	5459.5	49.7	100	130.71
20603	5469.5	49.8	100	130.71
20604	5481	49.9	100	130.71
20605	5491.5	50	100	130.71
20606	5503.5	50.1	100	130.71
20607	5514.5	50.2	100	130.71
20608	5525.5	50.3	100	130.71
20609	5537	50.4	100	130.71
20610	5548.5	50.5	100	130.71
20611	5559.5	50.6	100	130.71
20612	5570	50.7	100	130.71
20613	5581	50.8	100	130.71
20614	5591	50.9	100	130.71
20615	5603.5	51	100	130.71
20616	5614.5	51.1	100	130.71
20617	5625	51.2	100	130.71
20618	5635.5	51.3	100	130.71
20619	5646.5	51.4	100	130.71
20620	5659	51.5	100	130.71
20621	5669.5	51.6	100	130.71
20622	5680	51.7	100	130.71
20623	5690	51.8	100	130.71
20624	5701.5	51.9	100	130.71
20625	5713.5	52	100	130.71
20626	5723.5	52.1	100	130.71
20627	5735	52.2	100	130.71

20628	5745.5	52.3	100	130.71
20629	5758	52.4	100	130.71
20630	5767	52.5	100	130.71
20631	5778.5	52.6	100	130.71
20632	5791.5	52.7	100	130.71
20633	5802	52.8	100	130.71
20634	5811.5	52.9	100	130.71
20635	5822.5	53	100	130.71
20636	5833.5	53.1	100	130.71
20637	5845	53.2	100	130.71
20638	5855.5	53.3	100	130.71
20639	5867	53.4	100	130.71
20640	5879	53.5	100	130.71
20641	5889	53.6	100	130.71
20642	5899.5	53.7	100	130.71
20643	5912	53.8	100	130.71
20644	5922	53.9	100	130.71
20645	5933	54	100	130.71
20646	5943	54.1	100	130.71
20647	5954	54.2	100	130.71
20648	5966	54.3	100	130.71
20649	5977.5	54.4	100	130.71
20650	5988	54.5	100	130.71
20651	5998.5	54.6	100	130.71
20652	6001.5	54.7	100	130.71
20653	6001.5	54.8	100	130.71
20654	6002	54.9	100	130.71
21233	0	0	200	130.71
21234	1	0.1	200	130.71
21235	21.5	0.2	200	130.71
21236	43	0.3	200	130.71
21237	57.5	0.4	200	130.71
21238	84	0.5	200	130.71
21239	105	0.6	200	130.71
21240	131	0.7	200	130.71
21241	150	0.8	200	130.71
21242	168	0.9	200	130.71
21243	195	1	200	130.71
21244	215.5	1.1	200	130.71
21245	237.5	1.2	200	130.71
21246	259.5	1.3	200	130.71
21247	281.5	1.4	200	130.71

21248	307.5	1.5	200	130.71
21249	330	1.6	200	130.71
21250	351	1.7	200	130.71
21251	374.5	1.8	200	130.71
21252	395.5	1.9	200	130.71
21253	414	2	200	130.71
21254	431.5	2.1	200	130.71
21255	456.5	2.2	200	130.71
21256	480.5	2.3	200	130.71
21257	504	2.4	200	130.71
21258	527.5	2.5	200	130.71
21259	550.5	2.6	200	130.71
21260	572	2.7	200	130.71
21261	593.5	2.8	200	130.71
21262	617	2.9	200	130.71
21263	637.5	3	200	130.71
21264	658	3.1	200	130.71
21265	675	3.2	200	130.71
21266	698	3.3	200	130.71
21267	726	3.4	200	130.71
21268	747	3.5	200	130.71
21269	766	3.6	200	130.71
21270	790	3.7	200	130.71
21271	815	3.8	200	130.71
21272	835.5	3.9	200	130.71
21273	856.5	4	200	130.71
21274	882	4.1	200	130.71
21275	901.5	4.2	200	130.71
21276	921	4.3	200	130.71
21277	939	4.4	200	130.71
21278	967	4.5	200	130.71
21279	989.5	4.6	200	130.71
21280	1011	4.7	200	130.71
21281	1034	4.8	200	130.71
21282	1056	4.9	200	130.71
21283	1080	5	200	130.71
21284	1101	5.1	200	130.71
21285	1122.5	5.2	200	130.71
21286	1144.5	5.3	200	130.71
21287	1167	5.4	200	130.71
21288	1185	5.5	200	130.71
21289	1207.5	5.6	200	130.71

21290	1231.5	5.7	200	130.71
21291	1254	5.8	200	130.71
21292	1276.5	5.9	200	130.71
21293	1299.5	6	200	130.71
21294	1321.5	6.1	200	130.71
21295	1343	6.2	200	130.71
21296	1365	6.3	200	130.71
21297	1387	6.4	200	130.71
21298	1410	6.5	200	130.71
21299	1430	6.6	200	130.71
21300	1451.5	6.7	200	130.71
21301	1473.5	6.8	200	130.71
21302	1497	6.9	200	130.71
21303	1518.5	7	200	130.71
21304	1541.5	7.1	200	130.71
21305	1563.5	7.2	200	130.71
21306	1585.5	7.3	200	130.71
21307	1608.5	7.4	200	130.71
21308	1630.5	7.5	200	130.71
21309	1651	7.6	200	130.71
21310	1672	7.7	200	130.71
21311	1693.5	7.8	200	130.71
21312	1715	7.9	200	130.71
21313	1738.5	8	200	130.71
21314	1760.5	8.1	200	130.71
21315	1783.5	8.2	200	130.71
21316	1805.5	8.3	200	130.71
21317	1826.5	8.4	200	130.71
21318	1849.5	8.5	200	130.71
21319	1873	8.6	200	130.71
21320	1893.5	8.7	200	130.71
21321	1914.5	8.8	200	130.71
21322	1936	8.9	200	130.71
21323	1959.5	9	200	130.71
21324	1980.5	9.1	200	130.71
21325	2002	9.2	200	130.71
21326	2024.5	9.3	200	130.71
21327	2046.5	9.4	200	130.71
21328	2068.5	9.5	200	130.71
21329	2091	9.6	200	130.71
21330	2113.5	9.7	200	130.71
21331	2134.5	9.8	200	130.71

21332	2157	9.9	200	130.71
21333	2178	10	200	130.71
21334	2202	10.1	200	130.71
21335	2222.5	10.2	200	130.71
21336	2244.5	10.3	200	130.71
21337	2267	10.4	200	130.71
21338	2289.5	10.5	200	130.71
21339	2310	10.6	200	130.71
21340	2333.5	10.7	200	130.71
21341	2355.5	10.8	200	130.71
21342	2379	10.9	200	130.71
21343	2399.5	11	200	130.71
21344	2420	11.1	200	130.71
21345	2442	11.2	200	130.71
21346	2464	11.3	200	130.71
21347	2487	11.4	200	130.71
21348	2509.5	11.5	200	130.71
21349	2529.5	11.6	200	130.71
21350	2551	11.7	200	130.71
21351	2575	11.8	200	130.71
21352	2597.5	11.9	200	130.71
21353	2619	12	200	130.71
21354	2642	12.1	200	130.71
21355	2663.5	12.2	200	130.71
21356	2684.5	12.3	200	130.71
21357	2706	12.4	200	130.71
21358	2728.5	12.5	200	130.71
21359	2749.5	12.6	200	130.71
21360	2771.5	12.7	200	130.71
21361	2792	12.8	200	130.71
21362	2816.5	12.9	200	130.71
21363	2839.5	13	200	130.71
21364	2861	13.1	200	130.71
21365	2883.5	13.2	200	130.71
21366	2905	13.3	200	130.71
21367	2927	13.4	200	130.71
21368	2948	13.5	200	130.71
21369	2970.5	13.6	200	130.71
21370	2993	13.7	200	130.71
21371	3016	13.8	200	130.71
21372	3036.5	13.9	200	130.71
21373	3059	14	200	130.71

21374	3080	14.1	200	130.71
21375	3104	14.2	200	130.71
21376	3126	14.3	200	130.71
21377	3147.5	14.4	200	130.71
21378	3168.5	14.5	200	130.71
21379	3191	14.6	200	130.71
21380	3212.5	14.7	200	130.71
21381	3234.5	14.8	200	130.71
21382	3255.5	14.9	200	130.71
21383	3279	15	200	130.71
21384	3298.5	15.1	200	130.71
21385	3321.5	15.2	200	130.71
21386	3343.5	15.3	200	130.71
21387	3367	15.4	200	130.71
21388	3390.5	15.5	200	130.71
21389	3411	15.6	200	130.71
21390	3433	15.7	200	130.71
21391	3453.5	15.8	200	130.71
21392	3475.5	15.9	200	130.71
21393	3498.5	16	200	130.71
21394	3519.5	16.1	200	130.71
21395	3542.5	16.2	200	130.71
21396	3566	16.3	200	130.71
21397	3586	16.4	200	130.71
21398	3608.5	16.5	200	130.71
21399	3632.5	16.6	200	130.71
21400	3652.5	16.7	200	130.71
21401	3675	16.8	200	130.71
21402	3696.5	16.9	200	130.71
21403	3718.5	17	200	130.71
21404	3740	17.1	200	130.71
21405	3762	17.2	200	130.71
21406	3781.5	17.3	200	130.71
21407	3808	17.4	200	130.71
21408	3828.5	17.5	200	130.71
21409	3852.5	17.6	200	130.71
21410	3874	17.7	200	130.71
21411	3895.5	17.8	200	130.71
21412	3916	17.9	200	130.71
21413	3938	18	200	130.71
21414	3960.5	18.1	200	130.71
21415	3982.5	18.2	200	130.71

21416	4003.5	18.3	200	130.71
21417	4021.5	18.4	200	130.71
21418	4046.5	18.5	200	130.71
21419	4071	18.6	200	130.71
21420	4092.5	18.7	200	130.71
21421	4114.5	18.8	200	130.71
21422	4136.5	18.9	200	130.71
21423	4159.5	19	200	130.71
21424	4181	19.1	200	130.71
21425	4203.5	19.2	200	130.71
21426	4226	19.3	200	130.71
21427	4247.5	19.4	200	130.71
21428	4268	19.5	200	130.71
21429	4287.5	19.6	200	130.71
21430	4313	19.7	200	130.71
21431	4335.5	19.8	200	130.71
21432	4358	19.9	200	130.71
21433	4379	20	200	130.71
21434	4402.5	20.1	200	130.71
21435	4424	20.2	200	130.71
21436	4445.5	20.3	200	130.71
21437	4467	20.4	200	130.71
21438	4488.5	20.5	200	130.71
21439	4511	20.6	200	130.71
21440	4533	20.7	200	130.71
21441	4555	20.8	200	130.71
21442	4577	20.9	200	130.71
21443	4601.5	21	200	130.71
21444	4622.5	21.1	200	130.71
21445	4643.5	21.2	200	130.71
21446	4665	21.3	200	130.71
21447	4687.5	21.4	200	130.71
21448	4707.5	21.5	200	130.71
21449	4730.5	21.6	200	130.71
21450	4753.5	21.7	200	130.71
21451	4774	21.8	200	130.71
21452	4796.5	21.9	200	130.71
21453	4819.5	22	200	130.71
21454	4840.5	22.1	200	130.71
21455	4866	22.2	200	130.71
21456	4886	22.3	200	130.71
21457	4907.5	22.4	200	130.71

21458	4927.5	22.5	200	130.71
21459	4952.5	22.6	200	130.71
21460	4972	22.7	200	130.71
21461	4996.5	22.8	200	130.71
21462	5018	22.9	200	130.71
21463	5041	23	200	130.71
21464	5062	23.1	200	130.71
21465	5083.5	23.2	200	130.71
21466	5107	23.3	200	130.71
21467	5128.5	23.4	200	130.71
21468	5149.5	23.5	200	130.71
21469	5171	23.6	200	130.71
21470	5193.5	23.7	200	130.71
21471	5216.5	23.8	200	130.71
21472	5237.5	23.9	200	130.71
21473	5259.5	24	200	130.71
21474	5283	24.1	200	130.71
21475	5305	24.2	200	130.71
21476	5327	24.3	200	130.71
21477	5348.5	24.4	200	130.71
21478	5370	24.5	200	130.71
21479	5392.5	24.6	200	130.71
21480	5414	24.7	200	130.71
21481	5436	24.8	200	130.71
21482	5458.5	24.9	200	130.71
21483	5480.5	25	200	130.71
21484	5502.5	25.1	200	130.71
21485	5525.5	25.2	200	130.71
21486	5547	25.3	200	130.71
21487	5571	25.4	200	130.71
21488	5591.5	25.5	200	130.71
21489	5613.5	25.6	200	130.71
21490	5635.5	25.7	200	130.71
21491	5659.5	25.8	200	130.71
21492	5680	25.9	200	130.71
21493	5702	26	200	130.71
21494	5723.5	26.1	200	130.71
21495	5747.5	26.2	200	130.71
21496	5768.5	26.3	200	130.71
21497	5791	26.4	200	130.71
21498	5813	26.5	200	130.71
21499	5835.5	26.6	200	130.71

21500	5857	26.7	200	130.71
21501	5879	26.8	200	130.71
21502	5902	26.9	200	130.71
21503	5923.5	27	200	130.71
21504	5945	27.1	200	130.71
21505	5965	27.2	200	130.71
21506	5988.5	27.3	200	130.71
21507	6001.5	27.4	200	130.71
21508	6002.5	27.5	200	130.71
21509	6003	27.6	200	130.71
21813	0	0	300	130.71
21814	23	0.1	300	130.71
21815	54	0.2	300	130.71
21816	84	0.3	300	130.71
21817	122.5	0.4	300	130.71
21818	152	0.5	300	130.71
21819	183.5	0.6	300	130.71
21820	217	0.7	300	130.71
21821	250.5	0.8	300	130.71
21822	286.5	0.9	300	130.71
21823	320.5	1	300	130.71
21824	352.5	1.1	300	130.71
21825	385.5	1.2	300	130.71
21826	417	1.3	300	130.71
21827	445	1.4	300	130.71
21828	481	1.5	300	130.71
21829	514.5	1.6	300	130.71
21830	550.5	1.7	300	130.71
21831	584	1.8	300	130.71
21832	617.5	1.9	300	130.71
21833	649.5	2	300	130.71
21834	676.5	2.1	300	130.71
21835	714.5	2.2	300	130.71
21836	748	2.3	300	130.71
21837	781.5	2.4	300	130.71
21838	815.5	2.5	300	130.71
21839	848	2.6	300	130.71
21840	881	2.7	300	130.71
21841	912	2.8	300	130.71
21842	947	2.9	300	130.71
21843	979.5	3	300	130.71
21844	1013	3.1	300	130.71

21845	1047	3.2	300	130.71
21846	1080.5	3.3	300	130.71
21847	1113.5	3.4	300	130.71
21848	1145.5	3.5	300	130.71
21849	1179	3.6	300	130.71
21850	1211.5	3.7	300	130.71
21851	1245.5	3.8	300	130.71
21852	1277	3.9	300	130.71
21853	1311	4	300	130.71
21854	1343.5	4.1	300	130.71
21855	1378	4.2	300	130.71
21856	1410	4.3	300	130.71
21857	1442.5	4.4	300	130.71
21858	1474.5	4.5	300	130.71
21859	1508.5	4.6	300	130.71
21860	1541.5	4.7	300	130.71
21861	1576.5	4.8	300	130.71
21862	1608	4.9	300	130.71
21863	1642	5	300	130.71
21864	1672.5	5.1	300	130.71
21865	1707	5.2	300	130.71
21866	1739.5	5.3	300	130.71
21867	1774	5.4	300	130.71
21868	1807	5.5	300	130.71
21869	1839.5	5.6	300	130.71
21870	1873	5.7	300	130.71
21871	1905.5	5.8	300	130.71
21872	1938	5.9	300	130.71
21873	1972.5	6	300	130.71
21874	2004.5	6.1	300	130.71
21875	2038.5	6.2	300	130.71
21876	2070.5	6.3	300	130.71
21877	2104.5	6.4	300	130.71
21878	2138	6.5	300	130.71
21879	2168.5	6.6	300	130.71
21880	2202.5	6.7	300	130.71
21881	2235.5	6.8	300	130.71
21882	2268.5	6.9	300	130.71
21883	2301	7	300	130.71
21884	2334	7.1	300	130.71
21885	2368.5	7.2	300	130.71
21886	2401	7.3	300	130.71

21887	2431.5	7.4	300	130.71
21888	2465.5	7.5	300	130.71
21889	2500	7.6	300	130.71
21890	2531	7.7	300	130.71
21891	2567	7.8	300	130.71
21892	2599	7.9	300	130.71
21893	2631.5	8	300	130.71
21894	2665	8.1	300	130.71
21895	2695.5	8.2	300	130.71
21896	2730.5	8.3	300	130.71
21897	2764	8.4	300	130.71
21898	2795.5	8.5	300	130.71
21899	2830	8.6	300	130.71
21900	2862.5	8.7	300	130.71
21901	2895	8.8	300	130.71
21902	2927.5	8.9	300	130.71
21903	2960	9	300	130.71
21904	2993	9.1	300	130.71
21905	3027.5	9.2	300	130.71
21906	3060.5	9.3	300	130.71
21907	3093	9.4	300	130.71
21908	3126.5	9.5	300	130.71
21909	3157.5	9.6	300	130.71
21910	3192	9.7	300	130.71
21911	3225	9.8	300	130.71
21912	3256	9.9	300	130.71
21913	3291	10	300	130.71
21914	3322.5	10.1	300	130.71
21915	3358	10.2	300	130.71
21916	3389.5	10.3	300	130.71
21917	3423	10.4	300	130.71
21918	3453.5	10.5	300	130.71
21919	3487	10.6	300	130.71
21920	3520	10.7	300	130.71
21921	3555.5	10.8	300	130.71
21922	3587	10.9	300	130.71
21923	3622	11	300	130.71
21924	3653	11.1	300	130.71
21925	3687.5	11.2	300	130.71
21926	3719	11.3	300	130.71
21927	3752	11.4	300	130.71
21928	3782	11.5	300	130.71

21929	3818	11.6	300	130.71
21930	3852.5	11.7	300	130.71
21931	3885.5	11.8	300	130.71
21932	3916	11.9	300	130.71
21933	3948	12	300	130.71
21934	3982	12.1	300	130.71
21935	4014	12.2	300	130.71
21936	4047.5	12.3	300	130.71
21937	4084	12.4	300	130.71
21938	4114.5	12.5	300	130.71
21939	4147.5	12.6	300	130.71
21940	4181.5	12.7	300	130.71
21941	4214	12.8	300	130.71
21942	4247	12.9	300	130.71
21943	4280.5	13	300	130.71
21944	4312.5	13.1	300	130.71
21945	4346	13.2	300	130.71
21946	4381.5	13.3	300	130.71
21947	4413	13.4	300	130.71
21948	4444	13.5	300	130.71
21949	4479	13.6	300	130.71
21950	4510.5	13.7	300	130.71
21951	4546.5	13.8	300	130.71
21952	4577.5	13.9	300	130.71
21953	4612.5	14	300	130.71
21954	4644	14.1	300	130.71
21955	4676.5	14.2	300	130.71
21956	4709	14.3	300	130.71
21957	4743	14.4	300	130.71
21958	4777	14.5	300	130.71
21959	4808	14.6	300	130.71
21960	4841.5	14.7	300	130.71
21961	4876.5	14.8	300	130.71
21962	4909.5	14.9	300	130.71
21963	4940	15	300	130.71
21964	4975	15.1	300	130.71
21965	5007	15.2	300	130.71
21966	5042	15.3	300	130.71
21967	5073	15.4	300	130.71
21968	5107	15.5	300	130.71
21969	5141.5	15.6	300	130.71
21970	5174	15.7	300	130.71

21971	5207	15.8	300	130.71
21972	5237.5	15.9	300	130.71
21973	5271.5	16	300	130.71
21974	5303.5	16.1	300	130.71
21975	5339	16.2	300	130.71
21976	5372	16.3	300	130.71
21977	5404.5	16.4	300	130.71
21978	5437.5	16.5	300	130.71
21979	5472.5	16.6	300	130.71
21980	5505	16.7	300	130.71
21981	5537	16.8	300	130.71
21982	5571.5	16.9	300	130.71
21983	5603.5	17	300	130.71
21984	5636.5	17.1	300	130.71
21985	5669.5	17.2	300	130.71
21986	5705	17.3	300	130.71
21987	5737.5	17.4	300	130.71
21988	5770	17.5	300	130.71
21989	5803.5	17.6	300	130.71
21990	5836	17.7	300	130.71
21991	5867.5	17.8	300	130.71
21992	5901	17.9	300	130.71
21993	5935	18	300	130.71
21994	5967.5	18.1	300	130.71
21995	6001	18.2	300	130.71
21996	6001.5	18.3	300	130.71
21997	6002.5	18.4	300	130.71
21998	6002.5	18.5	300	130.71
21999	6003.5	18.6	300	130.71
22000	6003	18.7	300	130.71
22211	0	0	400	130.71
22212	0.5	0.1	400	130.71
22213	0.5	0.2	400	130.71
22214	1.5	0.3	400	130.71
22215	47	0.4	400	130.71
22216	91.5	0.5	400	130.71
22217	133.5	0.6	400	130.71
22218	172.5	0.7	400	130.71
22219	221	0.8	400	130.71
22220	268	0.9	400	130.71
22221	312.5	1	400	130.71
22222	358.5	1.1	400	130.71

22223	399	1.2	400	130.71
22224	441	1.3	400	130.71
22225	485.5	1.4	400	130.71
22226	531.5	1.5	400	130.71
22227	577.5	1.6	400	130.71
22228	621.5	1.7	400	130.71
22229	662.5	1.8	400	130.71
22230	707.5	1.9	400	130.71
22231	754	2	400	130.71
22232	800	2.1	400	130.71
22233	841.5	2.2	400	130.71
22234	884.5	2.3	400	130.71
22235	927.5	2.4	400	130.71
22236	975.5	2.5	400	130.71
22237	1018	2.6	400	130.71
22238	1061	2.7	400	130.71
22239	1108	2.8	400	130.71
22240	1149	2.9	400	130.71
22241	1193.5	3	400	130.71
22242	1236	3.1	400	130.71
22243	1280.5	3.2	400	130.71
22244	1326.5	3.3	400	130.71
22245	1370.5	3.4	400	130.71
22246	1415	3.5	400	130.71
22247	1456	3.6	400	130.71
22248	1501	3.7	400	130.71
22249	1546	3.8	400	130.71
22250	1590	3.9	400	130.71
22251	1635	4	400	130.71
22252	1677	4.1	400	130.71
22253	1721	4.2	400	130.71
22254	1768	4.3	400	130.71
22255	1811	4.4	400	130.71
22256	1857	4.5	400	130.71
22257	1897.5	4.6	400	130.71
22258	1942	4.7	400	130.71
22259	1987.5	4.8	400	130.71
22260	2030.5	4.9	400	130.71
22261	2074	5	400	130.71
22262	2122.5	5.1	400	130.71
22263	2162.5	5.2	400	130.71
22264	2205	5.3	400	130.71

22265	2249.5	5.4	400	130.71
22266	2294.5	5.5	400	130.71
22267	2341.5	5.6	400	130.71
22268	2384	5.7	400	130.71
22269	2426.5	5.8	400	130.71
22270	2475	5.9	400	130.71
22271	2515.5	6	400	130.71
22272	2559	6.1	400	130.71
22273	2603.5	6.2	400	130.71
22274	2648.5	6.3	400	130.71
22275	2691	6.4	400	130.71
22276	2736	6.5	400	130.71
22277	2777	6.6	400	130.71
22278	2823	6.7	400	130.71
22279	2866.5	6.8	400	130.71
22280	2908.5	6.9	400	130.71
22281	2955.5	7	400	130.71
22282	2998	7.1	400	130.71
22283	3043.5	7.2	400	130.71
22284	3088.5	7.3	400	130.71
22285	3132	7.4	400	130.71
22286	3176.5	7.5	400	130.71
22287	3218.5	7.6	400	130.71
22288	3261.5	7.7	400	130.71
22289	3306.5	7.8	400	130.71
22290	3352.5	7.9	400	130.71
22291	3395.5	8	400	130.71
22292	3439	8.1	400	130.71
22293	3483.5	8.2	400	130.71
22294	3528	8.3	400	130.71
22295	3572	8.4	400	130.71
22296	3617	8.5	400	130.71
22297	3659	8.6	400	130.71
22298	3703.5	8.7	400	130.71
22299	3746.5	8.8	400	130.71
22300	3790.5	8.9	400	130.71
22301	3836	9	400	130.71
22302	3881	9.1	400	130.71
22303	3922	9.2	400	130.71
22304	3966.5	9.3	400	130.71
22305	4010.5	9.4	400	130.71
22306	4053	9.5	400	130.71

22307	4099.5	9.6	400	130.71
22308	4144.5	9.7	400	130.71
22309	4188	9.8	400	130.71
22310	4233	9.9	400	130.71
22311	4274.5	10	400	130.71
22312	4320.5	10.1	400	130.71
22313	4364	10.2	400	130.71
22314	4407	10.3	400	130.71
22315	4451	10.4	400	130.71
22316	4494.5	10.5	400	130.71
22317	4539.5	10.6	400	130.71
22318	4583	10.7	400	130.71
22319	4628.5	10.8	400	130.71
22320	4674	10.9	400	130.71
22321	4714.5	11	400	130.71
22322	4759.5	11.1	400	130.71
22323	4804	11.2	400	130.71
22324	4849.5	11.3	400	130.71
22325	4892.5	11.4	400	130.71
22326	4937	11.5	400	130.71
22327	4981	11.6	400	130.71
22328	5026	11.7	400	130.71
22329	5069.5	11.8	400	130.71
22330	5113	11.9	400	130.71
22331	5156.5	12	400	130.71
22332	5201	12.1	400	130.71
22333	5245.5	12.2	400	130.71
22334	5290	12.3	400	130.71
22335	5332.5	12.4	400	130.71
22336	5376.5	12.5	400	130.71
22337	5421	12.6	400	130.71
22338	5465	12.7	400	130.71
22339	5510.5	12.8	400	130.71
22340	5555	12.9	400	130.71
22341	5598	13	400	130.71
22342	5644	13.1	400	130.71
22343	5686.5	13.2	400	130.71
22344	5732.5	13.3	400	130.71
22345	5775.5	13.4	400	130.71
22346	5819	13.5	400	130.71
22347	5864.5	13.6	400	130.71
22348	5906	13.7	400	130.71

22349	5951.5	13.8	400	130.71
22350	5998.5	13.9	400	130.71
22351	6001.5	14	400	130.71
22352	6002.5	14.1	400	130.71
22353	6003	14.2	400	130.71
22354	6003.5	14.3	400	130.71
22518	0	0	500	130.71
22519	1.5	0.1	500	130.71
22520	53	0.2	500	130.71
22521	105	0.3	500	130.71
22522	156	0.4	500	130.71
22523	209	0.5	500	130.71
22524	269.5	0.6	500	130.71
22525	330	0.7	500	130.71
22526	382.5	0.8	500	130.71
22527	429.5	0.9	500	130.71
22528	489.5	1	500	130.71
22529	546.5	1.1	500	130.71
22530	604	1.2	500	130.71
22531	656	1.3	500	130.71
22532	711	1.4	500	130.71
22533	769	1.5	500	130.71
22534	823	1.6	500	130.71
22535	879	1.7	500	130.71
22536	933.5	1.8	500	130.71
22537	989.5	1.9	500	130.71
22538	1047	2	500	130.71
22539	1102.5	2.1	500	130.71
22540	1157	2.2	500	130.71
22541	1210	2.3	500	130.71
22542	1264.5	2.4	500	130.71
22543	1322	2.5	500	130.71
22544	1377.5	2.6	500	130.71
22545	1429.5	2.7	500	130.71
22546	1489	2.8	500	130.71
22547	1542.5	2.9	500	130.71
22548	1599	3	500	130.71
22549	1651.5	3.1	500	130.71
22550	1708.5	3.2	500	130.71
22551	1761	3.3	500	130.71
22552	1815.5	3.4	500	130.71
22553	1873	3.5	500	130.71

22554	1927	3.6	500	130.71
22555	1982.5	3.7	500	130.71
22556	2038	3.8	500	130.71
22557	2093.5	3.9	500	130.71
22558	2146	4	500	130.71
22559	2202	4.1	500	130.71
22560	2257.5	4.2	500	130.71
22561	2311.5	4.3	500	130.71
22562	2366	4.4	500	130.71
22563	2420	4.5	500	130.71
22564	2477	4.6	500	130.71
22565	2532.5	4.7	500	130.71
22566	2587.5	4.8	500	130.71
22567	2642	4.9	500	130.71
22568	2699	5	500	130.71
22569	2753	5.1	500	130.71
22570	2808	5.2	500	130.71
22571	2862.5	5.3	500	130.71
22572	2917	5.4	500	130.71
22573	2970.5	5.5	500	130.71
22574	3028	5.6	500	130.71
22575	3083	5.7	500	130.71
22576	3137.5	5.8	500	130.71
22577	3193	5.9	500	130.71
22578	3247.5	6	500	130.71
22579	3304	6.1	500	130.71
22580	3357.5	6.2	500	130.71
22581	3411.5	6.3	500	130.71
22582	3467	6.4	500	130.71
22583	3523	6.5	500	130.71
22584	3577.5	6.6	500	130.71
22585	3630	6.7	500	130.71
22586	3685	6.8	500	130.71
22587	3744	6.9	500	130.71
22588	3796.5	7	500	130.71
22589	3855	7.1	500	130.71
22590	3906.5	7.2	500	130.71
22591	3963.5	7.3	500	130.71
22592	4016.5	7.4	500	130.71
22593	4074	7.5	500	130.71
22594	4127.5	7.6	500	130.71
22595	4183.5	7.7	500	130.71

22596	4237	7.8	500	130.71
22597	4294	7.9	500	130.71
22598	4349.5	8	500	130.71
22599	4404.5	8.1	500	130.71
22600	4457.5	8.2	500	130.71
22601	4512	8.3	500	130.71
22602	4567	8.4	500	130.71
22603	4626	8.5	500	130.71
22604	4677	8.6	500	130.71
22605	4734	8.7	500	130.71
22606	4790	8.8	500	130.71
22607	4843.5	8.9	500	130.71
22608	4897	9	500	130.71
22609	4955	9.1	500	130.71
22610	5010.5	9.2	500	130.71
22611	5062	9.3	500	130.71
22612	5118	9.4	500	130.71
22613	5177	9.5	500	130.71
22614	5229	9.6	500	130.71
22615	5283	9.7	500	130.71
22616	5339	9.8	500	130.71
22617	5393.5	9.9	500	130.71
22618	5451	10	500	130.71
22619	5504	10.1	500	130.71
22620	5560.5	10.2	500	130.71
22621	5614	10.3	500	130.71
22622	5670	10.4	500	130.71
22623	5725	10.5	500	130.71
22624	5780.5	10.6	500	130.71
22625	5837	10.7	500	130.71
22626	5891	10.8	500	130.71
22627	5948.5	10.9	500	130.71
22628	6000	11	500	130.71
22629	6003.5	11.1	500	130.71
22630	6004	11.2	500	130.71
22631	6004.5	11.3	500	130.71
22766	0	0	600	130.71
22767	1	0.1	600	130.71
22768	34.5	0.2	600	130.71
22769	84	0.3	600	130.71
22770	152.5	0.4	600	130.71
22771	216	0.5	600	130.71

22772	286.5	0.6	600	130.71
22773	354.5	0.7	600	130.71
22774	421.5	0.8	600	130.71
22775	482.5	0.9	600	130.71
22776	554	1	600	130.71
22777	620	1.1	600	130.71
22778	681.5	1.2	600	130.71
22779	751.5	1.3	600	130.71
22780	815	1.4	600	130.71
22781	884.5	1.5	600	130.71
22782	950.5	1.6	600	130.71
22783	1012	1.7	600	130.71
22784	1080.5	1.8	600	130.71
22785	1145	1.9	600	130.71
22786	1217.5	2	600	130.71
22787	1276.5	2.1	600	130.71
22788	1346	2.2	600	130.71
22789	1410.5	2.3	600	130.71
22790	1480.5	2.4	600	130.71
22791	1547.5	2.5	600	130.71
22792	1608	2.6	600	130.71
22793	1677	2.7	600	130.71
22794	1743	2.8	600	130.71
22795	1809	2.9	600	130.71
22796	1874	3	600	130.71
22797	1940	3.1	600	130.71
22798	2008	3.2	600	130.71
22799	2073	3.3	600	130.71
22800	2139.5	3.4	600	130.71
22801	2201.5	3.5	600	130.71
22802	2271	3.6	600	130.71
22803	2340.5	3.7	600	130.71
22804	2401.5	3.8	600	130.71
22805	2464.5	3.9	600	130.71
22806	2537	4	600	130.71
22807	2604.5	4.1	600	130.71
22808	2663.5	4.2	600	130.71
22809	2731.5	4.3	600	130.71
22810	2800.5	4.4	600	130.71
22811	2864	4.5	600	130.71
22812	2933	4.6	600	130.71
22813	2994.5	4.7	600	130.71

22814	3066	4.8	600	130.71
22815	3127	4.9	600	130.71
22816	3194.5	5	600	130.71
22817	3258.5	5.1	600	130.71
22818	3324	5.2	600	130.71
22819	3393	5.3	600	130.71
22820	3460.5	5.4	600	130.71
22821	3523.5	5.5	600	130.71
22822	3590	5.6	600	130.71
22823	3659.5	5.7	600	130.71
22824	3718.5	5.8	600	130.71
22825	3787	5.9	600	130.71
22826	3857	6	600	130.71
22827	3918.5	6.1	600	130.71
22828	3987.5	6.2	600	130.71
22829	4049	6.3	600	130.71
22830	4121.5	6.4	600	130.71
22831	4181.5	6.5	600	130.71
22832	4253	6.6	600	130.71
22833	4316	6.7	600	130.71
22834	4381	6.8	600	130.71
22835	4447.5	6.9	600	130.71
22836	4516	7	600	130.71
22837	4576.5	7.1	600	130.71
22838	4646.5	7.2	600	130.71
22839	4712	7.3	600	130.71
22840	4781	7.4	600	130.71
22841	4844.5	7.5	600	130.71
22842	4909.5	7.6	600	130.71
22843	4978	7.7	600	130.71
22844	5043	7.8	600	130.71
22845	5111	7.9	600	130.71
22846	5174.5	8	600	130.71
22847	5242.5	8.1	600	130.71
22848	5305.5	8.2	600	130.71
22849	5373.5	8.3	600	130.71
22850	5439.5	8.4	600	130.71
22851	5507	8.5	600	130.71
22852	5573.5	8.6	600	130.71
22853	5638.5	8.7	600	130.71
22854	5707.5	8.8	600	130.71
22855	5773.5	8.9	600	130.71

22856	5842	9	600	130.71
22857	5905.5	9.1	600	130.71
22858	5970	9.2	600	130.71
22859	6002.5	9.3	600	130.71
22860	6003	9.4	600	130.71
22861	6003.5	9.5	600	130.71
22862	6004	9.6	600	130.71
22986	0	0	700	130.71
22987	1.5	0.1	700	130.71
22988	59.5	0.2	700	130.71
22989	138.5	0.3	700	130.71
22990	211.5	0.4	700	130.71
22991	292	0.5	700	130.71
22992	366.5	0.6	700	130.71
22993	441.5	0.7	700	130.71
22994	523.5	0.8	700	130.71
22995	603.5	0.9	700	130.71
22996	674.5	1	700	130.71
22997	755	1.1	700	130.71
22998	830.5	1.2	700	130.71
22999	910	1.3	700	130.71
23000	989.5	1.4	700	130.71
23001	1066.5	1.5	700	130.71
23002	1137	1.6	700	130.71
23003	1218	1.7	700	130.71
23004	1300.5	1.8	700	130.71
23005	1371.5	1.9	700	130.71
23006	1448	2	700	130.71
23007	1529	2.1	700	130.71
23008	1603	2.2	700	130.71
23009	1682	2.3	700	130.71
23010	1756.5	2.4	700	130.71
23011	1834.5	2.5	700	130.71
23012	1909	2.6	700	130.71
23013	1995.5	2.7	700	130.71
23014	2065	2.8	700	130.71
23015	2146.5	2.9	700	130.71
23016	2220.5	3	700	130.71
23017	2298.5	3.1	700	130.71
23018	2378	3.2	700	130.71
23019	2449.5	3.3	700	130.71
23020	2529.5	3.4	700	130.71

23021	2611	3.5	700	130.71
23022	2678	3.6	700	130.71
23023	2760.5	3.7	700	130.71
23024	2835	3.8	700	130.71
23025	2910.5	3.9	700	130.71
23026	2993	4	700	130.71
23027	3066	4.1	700	130.71
23028	3143	4.2	700	130.71
23029	3230	4.3	700	130.71
23030	3298.5	4.4	700	130.71
23031	3372.5	4.5	700	130.71
23032	3456.5	4.6	700	130.71
23033	3535.5	4.7	700	130.71
23034	3609.5	4.8	700	130.71
23035	3684.5	4.9	700	130.71
23036	3763.5	5	700	130.71
23037	3843.5	5.1	700	130.71
23038	3914.5	5.2	700	130.71
23039	3993.5	5.3	700	130.71
23040	4068.5	5.4	700	130.71
23041	4143.5	5.5	700	130.71
23042	4220	5.6	700	130.71
23043	4298.5	5.7	700	130.71
23044	4382.5	5.8	700	130.71
23045	4455.5	5.9	700	130.71
23046	4530	6	700	130.71
23047	4607	6.1	700	130.71
23048	4685	6.2	700	130.71
23049	4761	6.3	700	130.71
23050	4837.5	6.4	700	130.71
23051	4916	6.5	700	130.71
23052	4994	6.6	700	130.71
23053	5073.5	6.7	700	130.71
23054	5149	6.8	700	130.71
23055	5222.5	6.9	700	130.71
23056	5302	7	700	130.71
23057	5380	7.1	700	130.71
23058	5457.5	7.2	700	130.71
23059	5537.5	7.3	700	130.71
23060	5610	7.4	700	130.71
23061	5690	7.5	700	130.71
23062	5767	7.6	700	130.71

23063	5841	7.7	700	130.71
23064	5921	7.8	700	130.71
23065	5995.5	7.9	700	130.71
23066	6004	8	700	130.71
23194	0	0	800	130.71
23195	0.5	0.1	800	130.71
23196	40	0.2	800	130.71
23197	114.5	0.3	800	130.71
23198	209	0.4	800	130.71
23199	300	0.5	800	130.71
23200	381	0.6	800	130.71
23201	471.5	0.7	800	130.71
23202	565	0.8	800	130.71
23203	646	0.9	800	130.71
23204	736.5	1	800	130.71
23205	825	1.1	800	130.71
23206	919	1.2	800	130.71
23207	1000.5	1.3	800	130.71
23208	1092.5	1.4	800	130.71
23209	1185.5	1.5	800	130.71
23210	1268	1.6	800	130.71
23211	1354.5	1.7	800	130.71
23212	1440.5	1.8	800	130.71
23213	1530	1.9	800	130.71
23214	1620.5	2	800	130.71
23215	1713	2.1	800	130.71
23216	1795.5	2.2	800	130.71
23217	1882.5	2.3	800	130.71
23218	1970.5	2.4	800	130.71
23219	2056.5	2.5	800	130.71
23220	2146	2.6	800	130.71
23221	2236.5	2.7	800	130.71
23222	2323	2.8	800	130.71
23223	2410	2.9	800	130.71
23224	2497	3	800	130.71
23225	2587	3.1	800	130.71
23226	2673.5	3.2	800	130.71
23227	2765	3.3	800	130.71
23228	2857	3.4	800	130.71
23229	2938	3.5	800	130.71
23230	3025	3.6	800	130.71
23231	3114.5	3.7	800	130.71

23232	3206.5	3.8	800	130.71
23233	3292	3.9	800	130.71
23234	3381	4	800	130.71
23235	3468.5	4.1	800	130.71
23236	3559.5	4.2	800	130.71
23237	3645.5	4.3	800	130.71
23238	3732	4.4	800	130.71
23239	3823	4.5	800	130.71
23240	3906	4.6	800	130.71
23241	3992	4.7	800	130.71
23242	4086.5	4.8	800	130.71
23243	4176.5	4.9	800	130.71
23244	4265.5	5	800	130.71
23245	4351.5	5.1	800	130.71
23246	4438.5	5.2	800	130.71
23247	4527	5.3	800	130.71
23248	4612	5.4	800	130.71
23249	4700	5.5	800	130.71
23250	4789	5.6	800	130.71
23251	4878	5.7	800	130.71
23252	4963	5.8	800	130.71
23253	5050	5.9	800	130.71
23254	5139.5	6	800	130.71
23255	5232.5	6.1	800	130.71
23256	5319.5	6.2	800	130.71
23257	5404.5	6.3	800	130.71
23258	5495.5	6.4	800	130.71
23259	5586	6.5	800	130.71
23260	5670.5	6.6	800	130.71
23261	5757	6.7	800	130.71
23262	5852	6.8	800	130.71
23263	5939	6.9	800	130.71
23264	6003.5	7	800	130.71
23265	6005	7.1	800	130.71
23374	0	0	900	130.71
23375	0.5	0.1	900	130.71
23376	43	0.2	900	130.71
23377	138.5	0.3	900	130.71
23378	231	0.4	900	130.71
23379	334	0.5	900	130.71
23380	425.5	0.6	900	130.71
23381	536.5	0.7	900	130.71

23382	629	0.8	900	130.71
23383	730.5	0.9	900	130.71
23384	827	1	900	130.71
23385	924	1.1	900	130.71
23386	1027.5	1.2	900	130.71
23387	1132.5	1.3	900	130.71
23388	1234.5	1.4	900	130.71
23389	1323	1.5	900	130.71
23390	1424	1.6	900	130.71
23391	1527.5	1.7	900	130.71
23392	1621	1.8	900	130.71
23393	1725.5	1.9	900	130.71
23394	1823	2	900	130.71
23395	1925	2.1	900	130.71
23396	2026.5	2.2	900	130.71
23397	2118	2.3	900	130.71
23398	2216.5	2.4	900	130.71
23399	2320.5	2.5	900	130.71
23400	2416.5	2.6	900	130.71
23401	2523.5	2.7	900	130.71
23402	2613.5	2.8	900	130.71
23403	2717	2.9	900	130.71
23404	2817	3	900	130.71
23405	2910.5	3.1	900	130.71
23406	3012.5	3.2	900	130.71
23407	3116	3.3	900	130.71
23408	3217	3.4	900	130.71
23409	3306	3.5	900	130.71
23410	3409.5	3.6	900	130.71
23411	3511	3.7	900	130.71
23412	3609	3.8	900	130.71
23413	3707	3.9	900	130.71
23414	3811	4	900	130.71
23415	3909.5	4.1	900	130.71
23416	4005	4.2	900	130.71
23417	4109	4.3	900	130.71
23418	4202.5	4.4	900	130.71
23419	4301.5	4.5	900	130.71
23420	4408	4.6	900	130.71
23421	4502.5	4.7	900	130.71
23422	4599.5	4.8	900	130.71
23423	4703.5	4.9	900	130.71

23424	4799.5	5	900	130.71
23425	4897.5	5.1	900	130.71
23426	4994	5.2	900	130.71
23427	5099.5	5.3	900	130.71
23428	5198	5.4	900	130.71
23429	5299	5.5	900	130.71
23430	5401.5	5.6	900	130.71
23431	5504.5	5.7	900	130.71
23432	5595.5	5.8	900	130.71
23433	5700	5.9	900	130.71
23434	5793	6	900	130.71
23435	5898.5	6.1	900	130.71
23436	5991	6.2	900	130.71
23437	6006.5	6.3	900	130.71
23438	6007	6.4	900	130.71
23439	6007.5	6.5	900	130.71
23440	6008	6.6	900	130.71
23537	0	0	1000	130.71
23538	0.5	0.1	1000	130.71
23539	38.5	0.2	1000	130.71
23540	114.5	0.3	1000	130.71
23541	227	0.4	1000	130.71
23542	345	0.5	1000	130.71
23543	449	0.6	1000	130.71
23544	565.5	0.7	1000	130.71
23545	665.5	0.8	1000	130.71
23546	788	0.9	1000	130.71
23547	895	1	1000	130.71
23548	999.5	1.1	1000	130.71
23549	1113.5	1.2	1000	130.71
23550	1228.5	1.3	1000	130.71
23551	1339.5	1.4	1000	130.71
23552	1442	1.5	1000	130.71
23553	1553	1.6	1000	130.71
23554	1659.5	1.7	1000	130.71
23555	1769.5	1.8	1000	130.71
23556	1884.5	1.9	1000	130.71
23557	2000	2	1000	130.71
23558	2105	2.1	1000	130.71
23559	2225	2.2	1000	130.71
23560	2328	2.3	1000	130.71
23561	2436.5	2.4	1000	130.71

23562	2544	2.5	1000	130.71
23563	2654	2.6	1000	130.71
23564	2764.5	2.7	1000	130.71
23565	2878.5	2.8	1000	130.71
23566	2983.5	2.9	1000	130.71
23567	3100.5	3	1000	130.71
23568	3205.5	3.1	1000	130.71
23569	3320.5	3.2	1000	130.71
23570	3423.5	3.3	1000	130.71
23571	3539	3.4	1000	130.71
23572	3646	3.5	1000	130.71
23573	3762	3.6	1000	130.71
23574	3867	3.7	1000	130.71
23575	3979	3.8	1000	130.71
23576	4088.5	3.9	1000	130.71
23577	4200	4	1000	130.71
23578	4315	4.1	1000	130.71
23579	4421	4.2	1000	130.71
23580	4532.5	4.3	1000	130.71
23581	4647	4.4	1000	130.71
23582	4749	4.5	1000	130.71
23583	4865	4.6	1000	130.71
23584	4973.5	4.7	1000	130.71
23585	5088	4.8	1000	130.71
23586	5189.5	4.9	1000	130.71
23587	5303	5	1000	130.71
23588	5418	5.1	1000	130.71
23589	5529	5.2	1000	130.71
23590	5631	5.3	1000	130.71
23591	5752	5.4	1000	130.71
23592	5854.5	5.5	1000	130.71
23593	5969.5	5.6	1000	130.71
23594	6005.5	5.7	1000	130.71
23595	6006.5	5.8	1000	130.71
23596	6006.5	5.9	1000	130.71
23597	6007	6	1000	130.71
23697	0.5	0	2000	130.71
23698	36.5	0.1	2000	130.71
23699	103	0.2	2000	130.71
23700	240	0.3	2000	130.71
23701	406	0.4	2000	130.71
23702	635.5	0.5	2000	130.71

23703	851	0.6	2000	130.71
23704	1086	0.7	2000	130.71
23705	1288	0.8	2000	130.71
23706	1529	0.9	2000	130.71
23707	1733.5	1	2000	130.71
23708	1962.5	1.1	2000	130.71
23709	2181.5	1.2	2000	130.71
23710	2396	1.3	2000	130.71
23711	2613.5	1.4	2000	130.71
23712	2854	1.5	2000	130.71
23713	3057.5	1.6	2000	130.71
23714	3276.5	1.7	2000	130.71
23715	3489.5	1.8	2000	130.71
23716	3709.5	1.9	2000	130.71
23717	3937	2	2000	130.71
23718	4155	2.1	2000	130.71
23719	4371	2.2	2000	130.71
23720	4603.5	2.3	2000	130.71
23721	4813	2.4	2000	130.71
23722	5039	2.5	2000	130.71
23723	5277	2.6	2000	130.71
23724	5478	2.7	2000	130.71
23725	5701	2.8	2000	130.71
23726	5927	2.9	2000	130.71
23727	6004.5	3	2000	130.71
23816	0	0	3000	130.71
23817	1	0.1	3000	130.71
23818	39	0.2	3000	130.71
23819	109.5	0.3	3000	130.71
23820	243.5	0.4	3000	130.71
23821	419	0.5	3000	130.71
23822	643.5	0.6	3000	130.71
23823	920	0.7	3000	130.71
23824	1268.5	0.8	3000	130.71
23825	1586.5	0.9	3000	130.71
23826	1923	1	3000	130.71
23827	2252.5	1.1	3000	130.71
23828	2583	1.2	3000	130.71
23829	2900	1.3	3000	130.71
23830	3241.5	1.4	3000	130.71
23831	3566.5	1.5	3000	130.71
23832	3891.5	1.6	3000	130.71

23833	4241.5	1.7	3000	130.71
23834	4574.5	1.8	3000	130.71
23835	4896.5	1.9	3000	130.71
23836	5210	2	3000	130.71
23837	5575	2.1	3000	130.71
23838	5898	2.2	3000	130.71
23839	6010.5	2.3	3000	130.71
23886	0	0	4000	130.71
23887	1	0.1	4000	130.71
23888	38.5	0.2	4000	130.71
23889	108.5	0.3	4000	130.71
23890	245	0.4	4000	130.71
23891	421	0.5	4000	130.71
23892	638	0.6	4000	130.71
23893	914.5	0.7	4000	130.71
23894	1265	0.8	4000	130.71
23895	1626.5	0.9	4000	130.71
23896	2040	1	4000	130.71
23897	2480	1.1	4000	130.71
23898	2926	1.2	4000	130.71
23899	3376.5	1.3	4000	130.71
23900	3785.5	1.4	4000	130.71
23901	4227.5	1.5	4000	130.71
23902	4690.5	1.6	4000	130.71
23903	5124	1.7	4000	130.71
23904	5575	1.8	4000	130.71
23905	6019	1.9	4000	130.71
23906	6013.5	2	4000	130.71
23907	6014	2.1	4000	130.71
23908	6013.5	2.2	4000	130.71
23909	5994.5	2.3	4000	130.71
23910	5995	2.4	4000	130.71
30456	0.5	0	100	196.55
30457	3	0.1	100	196.55
30458	10.5	0.2	100	196.55
30459	32.5	0.3	100	196.55
30460	42	0.4	100	196.55
30461	48	0.5	100	196.55
30462	54.5	0.6	100	196.55
30463	66.5	0.7	100	196.55
30464	77	0.8	100	196.55
30465	83.5	0.9	100	196.55

30466	90	1	100	196.55
30467	105.5	1.1	100	196.55
30468	115	1.2	100	196.55
30469	130.5	1.3	100	196.55
30470	144.5	1.4	100	196.55
30471	149	1.5	100	196.55
30472	162	1.6	100	196.55
30473	172.5	1.7	100	196.55
30474	180	1.8	100	196.55
30475	198	1.9	100	196.55
30476	208.5	2	100	196.55
30477	217.5	2.1	100	196.55
30478	231.5	2.2	100	196.55
30479	242.5	2.3	100	196.55
30480	253	2.4	100	196.55
30481	263	2.5	100	196.55
30482	274.5	2.6	100	196.55
30483	286	2.7	100	196.55
30484	299	2.8	100	196.55
30485	311	2.9	100	196.55
30486	319.5	3	100	196.55
30487	329	3.1	100	196.55
30488	339.5	3.2	100	196.55
30489	346.5	3.3	100	196.55
30490	354.5	3.4	100	196.55
30491	365	3.5	100	196.55
30492	380	3.6	100	196.55
30493	386.5	3.7	100	196.55
30494	398	3.8	100	196.55
30495	406.5	3.9	100	196.55
30496	426	4	100	196.55
30497	435.5	4.1	100	196.55
30498	445	4.2	100	196.55
30499	454	4.3	100	196.55
30500	468	4.4	100	196.55
30501	483	4.5	100	196.55
30502	491	4.6	100	196.55
30503	503.5	4.7	100	196.55
30504	514	4.8	100	196.55
30505	523.5	4.9	100	196.55
30506	532.5	5	100	196.55
30507	544	5.1	100	196.55

30508	554.5	5.2	100	196.55
30509	565	5.3	100	196.55
30510	578.5	5.4	100	196.55
30511	590.5	5.5	100	196.55
30512	603.5	5.6	100	196.55
30513	614.5	5.7	100	196.55
30514	624	5.8	100	196.55
30515	634	5.9	100	196.55
30516	641.5	6	100	196.55
30517	656	6.1	100	196.55
30518	664	6.2	100	196.55
30519	674	6.3	100	196.55
30520	689.5	6.4	100	196.55
30521	705.5	6.5	100	196.55
30522	715.5	6.6	100	196.55
30523	725.5	6.7	100	196.55
30524	734.5	6.8	100	196.55
30525	739.5	6.9	100	196.55
30526	755.5	7	100	196.55
30527	768.5	7.1	100	196.55
30528	778	7.2	100	196.55
30529	790.5	7.3	100	196.55
30530	802	7.4	100	196.55
30531	810	7.5	100	196.55
30532	819	7.6	100	196.55
30533	827.5	7.7	100	196.55
30534	838	7.8	100	196.55
30535	860	7.9	100	196.55
30536	868.5	8	100	196.55
30537	878	8.1	100	196.55
30538	889	8.2	100	196.55
30539	900	8.3	100	196.55
30540	910	8.4	100	196.55
30541	923	8.5	100	196.55
30542	939	8.6	100	196.55
30543	948.5	8.7	100	196.55
30544	956.5	8.8	100	196.55
30545	972.5	8.9	100	196.55
30546	981	9	100	196.55
30547	990.5	9.1	100	196.55
30548	1001.5	9.2	100	196.55
30549	1009.5	9.3	100	196.55

30550	1021.5	9.4	100	196.55
30551	1031	9.5	100	196.55
30552	1042	9.6	100	196.55
30553	1054.5	9.7	100	196.55
30554	1066	9.8	100	196.55
30555	1075	9.9	100	196.55
30556	1085.5	10	100	196.55
30557	1100.5	10.1	100	196.55
30558	1110	10.2	100	196.55
30559	1122.5	10.3	100	196.55
30560	1136.5	10.4	100	196.55
30561	1146	10.5	100	196.55
30562	1153.5	10.6	100	196.55
30563	1162.5	10.7	100	196.55
30564	1174.5	10.8	100	196.55
30565	1186	10.9	100	196.55
30566	1196.5	11	100	196.55
30567	1207.5	11.1	100	196.55
30568	1218.5	11.2	100	196.55
30569	1231	11.3	100	196.55
30570	1244	11.4	100	196.55
30571	1254.5	11.5	100	196.55
30572	1266	11.6	100	196.55
30573	1277	11.7	100	196.55
30574	1290	11.8	100	196.55
30575	1301.5	11.9	100	196.55
30576	1312.5	12	100	196.55
30577	1322	12.1	100	196.55
30578	1335	12.2	100	196.55
30579	1346	12.3	100	196.55
30580	1357.5	12.4	100	196.55
30581	1367.5	12.5	100	196.55
30582	1375.5	12.6	100	196.55
30583	1385	12.7	100	196.55
30584	1402.5	12.8	100	196.55
30585	1409.5	12.9	100	196.55
30586	1418	13	100	196.55
30587	1433	13.1	100	196.55
30588	1445.5	13.2	100	196.55
30589	1454	13.3	100	196.55
30590	1468.5	13.4	100	196.55
30591	1477	13.5	100	196.55

30592	1487.5	13.6	100	196.55
30593	1498	13.7	100	196.55
30594	1508	13.8	100	196.55
30595	1520	13.9	100	196.55
30596	1532	14	100	196.55
30597	1543	14.1	100	196.55
30598	1558.5	14.2	100	196.55
30599	1567	14.3	100	196.55
30600	1578.5	14.4	100	196.55
30601	1592	14.5	100	196.55
30602	1602.5	14.6	100	196.55
30603	1611	14.7	100	196.55
30604	1618	14.8	100	196.55
30605	1631.5	14.9	100	196.55
30606	1645.5	15	100	196.55
30607	1656	15.1	100	196.55
30608	1669	15.2	100	196.55
30609	1678.5	15.3	100	196.55
30610	1689.5	15.4	100	196.55
30611	1699	15.5	100	196.55
30612	1711	15.6	100	196.55
30613	1719	15.7	100	196.55
30614	1734.5	15.8	100	196.55
30615	1743	15.9	100	196.55
30616	1759.5	16	100	196.55
30617	1765	16.1	100	196.55
30618	1782.5	16.2	100	196.55
30619	1790.5	16.3	100	196.55
30620	1803	16.4	100	196.55
30621	1812	16.5	100	196.55
30622	1821.5	16.6	100	196.55
30623	1832.5	16.7	100	196.55
30624	1843.5	16.8	100	196.55
30625	1854.5	16.9	100	196.55
30626	1862	17	100	196.55
30627	1875	17.1	100	196.55
30628	1885	17.2	100	196.55
30629	1892.5	17.3	100	196.55
30630	1906.5	17.4	100	196.55
30631	1915	17.5	100	196.55
30632	1929.5	17.6	100	196.55
30633	1941	17.7	100	196.55

30634	1949	17.8	100	196.55
30635	1964.5	17.9	100	196.55
30636	1974.5	18	100	196.55
30637	1980	18.1	100	196.55
30638	2001	18.2	100	196.55
30639	2007	18.3	100	196.55
30640	2023.5	18.4	100	196.55
30641	2029.5	18.5	100	196.55
30642	2041.5	18.6	100	196.55
30643	2056	18.7	100	196.55
30644	2066	18.8	100	196.55
30645	2079	18.9	100	196.55
30646	2088.5	19	100	196.55
30647	2100.5	19.1	100	196.55
30648	2109	19.2	100	196.55
30649	2119	19.3	100	196.55
30650	2130.5	19.4	100	196.55
30651	2143.5	19.5	100	196.55
30652	2155	19.6	100	196.55
30653	2167.5	19.7	100	196.55
30654	2176.5	19.8	100	196.55
30655	2188.5	19.9	100	196.55
30656	2199.5	20	100	196.55
30657	2210.5	20.1	100	196.55
30658	2218.5	20.2	100	196.55
30659	2224.5	20.3	100	196.55
30660	2246	20.4	100	196.55
30661	2252	20.5	100	196.55
30662	2265.5	20.6	100	196.55
30663	2277	20.7	100	196.55
30664	2290.5	20.8	100	196.55
30665	2296	20.9	100	196.55
30666	2309.5	21	100	196.55
30667	2320.5	21.1	100	196.55
30668	2333	21.2	100	196.55
30669	2342	21.3	100	196.55
30670	2356.5	21.4	100	196.55
30671	2364.5	21.5	100	196.55
30672	2376.5	21.6	100	196.55
30673	2386	21.7	100	196.55
30674	2398	21.8	100	196.55
30675	2408.5	21.9	100	196.55

30676	2422.5	22	100	196.55
30677	2430.5	22.1	100	196.55
30678	2440.5	22.2	100	196.55
30679	2455	22.3	100	196.55
30680	2464.5	22.4	100	196.55
30681	2474.5	22.5	100	196.55
30682	2483.5	22.6	100	196.55
30683	2500	22.7	100	196.55
30684	2506.5	22.8	100	196.55
30685	2521.5	22.9	100	196.55
30686	2528.5	23	100	196.55
30687	2542.5	23.1	100	196.55
30688	2551.5	23.2	100	196.55
30689	2562.5	23.3	100	196.55
30690	2574	23.4	100	196.55
30691	2589	23.5	100	196.55
30692	2597.5	23.6	100	196.55
30693	2609	23.7	100	196.55
30694	2619.5	23.8	100	196.55
30695	2629	23.9	100	196.55
30696	2640.5	24	100	196.55
30697	2652.5	24.1	100	196.55
30698	2664.5	24.2	100	196.55
30699	2674	24.3	100	196.55
30700	2686.5	24.4	100	196.55
30701	2696	24.5	100	196.55
30702	2709	24.6	100	196.55
30703	2720	24.7	100	196.55
30704	2730.5	24.8	100	196.55
30705	2739.5	24.9	100	196.55
30706	2750.5	25	100	196.55
30707	2762.5	25.1	100	196.55
30708	2774	25.2	100	196.55
30709	2782	25.3	100	196.55
30710	2795	25.4	100	196.55
30711	2808	25.5	100	196.55
30712	2818	25.6	100	196.55
30713	2829.5	25.7	100	196.55
30714	2841	25.8	100	196.55
30715	2851	25.9	100	196.55
30716	2863	26	100	196.55
30717	2872	26.1	100	196.55

30718	2883	26.2	100	196.55
30719	2894.5	26.3	100	196.55
30720	2906	26.4	100	196.55
30721	2916.5	26.5	100	196.55
30722	2926	26.6	100	196.55
30723	2939	26.7	100	196.55
30724	2948	26.8	100	196.55
30725	2960	26.9	100	196.55
30726	2970	27	100	196.55
30727	2985.5	27.1	100	196.55
30728	2996.5	27.2	100	196.55
30729	3006	27.3	100	196.55
30730	3011.5	27.4	100	196.55
30731	3030	27.5	100	196.55
30732	3038.5	27.6	100	196.55
30733	3049.5	27.7	100	196.55
30734	3059.5	27.8	100	196.55
30735	3073	27.9	100	196.55
30736	3083	28	100	196.55
30737	3095.5	28.1	100	196.55
30738	3109	28.2	100	196.55
30739	3118.5	28.3	100	196.55
30740	3128.5	28.4	100	196.55
30741	3139.5	28.5	100	196.55
30742	3149.5	28.6	100	196.55
30743	3161	28.7	100	196.55
30744	3171	28.8	100	196.55
30745	3182.5	28.9	100	196.55
30746	3193.5	29	100	196.55
30747	3205	29.1	100	196.55
30748	3215.5	29.2	100	196.55
30749	3227	29.3	100	196.55
30750	3238.5	29.4	100	196.55
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30752	3261.5	29.6	100	196.55
30753	3270	29.7	100	196.55
30754	3282	29.8	100	196.55
30755	3292	29.9	100	196.55
30756	3302	30	100	196.55
30757	3310.5	30.1	100	196.55
30758	3325.5	30.2	100	196.55
30759	3335	30.3	100	196.55

30760	3343	30.4	100	196.55
30761	3361.5	30.5	100	196.55
30762	3367	30.6	100	196.55
30763	3379.5	30.7	100	196.55
30764	3390	30.8	100	196.55
30765	3403	30.9	100	196.55
30766	3414	31	100	196.55
30767	3423	31.1	100	196.55
30768	3438	31.2	100	196.55
30769	3445.5	31.3	100	196.55
30770	3456.5	31.4	100	196.55
30771	3468.5	31.5	100	196.55
30772	3479	31.6	100	196.55
30773	3490.5	31.7	100	196.55
30774	3501	31.8	100	196.55
30775	3512.5	31.9	100	196.55
30776	3522.5	32	100	196.55
30777	3530	32.1	100	196.55
30778	3545	32.2	100	196.55
30779	3555	32.3	100	196.55
30780	3567	32.4	100	196.55
30781	3579	32.5	100	196.55
30782	3589	32.6	100	196.55
30783	3602.5	32.7	100	196.55
30784	3611	32.8	100	196.55
30785	3623.5	32.9	100	196.55
30786	3633	33	100	196.55
30787	3642.5	33.1	100	196.55
30788	3654	33.2	100	196.55
30789	3665.5	33.3	100	196.55
30790	3675.5	33.4	100	196.55
30791	3686	33.5	100	196.55
30792	3698	33.6	100	196.55
30793	3708.5	33.7	100	196.55
30794	3722	33.8	100	196.55
30795	3733.5	33.9	100	196.55
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30798	3768.5	34.2	100	196.55
30799	3777	34.3	100	196.55
30800	3788.5	34.4	100	196.55
30801	3799.5	34.5	100	196.55

30802	3811	34.6	100	196.55
30803	3821.5	34.7	100	196.55
30804	3832.5	34.8	100	196.55
30805	3842.5	34.9	100	196.55
30806	3854	35	100	196.55
30807	3864.5	35.1	100	196.55
30808	3878	35.2	100	196.55
30809	3887	35.3	100	196.55
30810	3898.5	35.4	100	196.55
30811	3910.5	35.5	100	196.55
30812	3920	35.6	100	196.55
30813	3932	35.7	100	196.55
30814	3940	35.8	100	196.55
30815	3952.5	35.9	100	196.55
30816	3963	36	100	196.55
30817	3975	36.1	100	196.55
30818	3985	36.2	100	196.55
30819	3998	36.3	100	196.55
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30821	4021.5	36.5	100	196.55
30822	4029.5	36.6	100	196.55
30823	4041.5	36.7	100	196.55
30824	4054.5	36.8	100	196.55
30825	4063	36.9	100	196.55
30826	4074.5	37	100	196.55
30827	4085	37.1	100	196.55
30828	4096.5	37.2	100	196.55
30829	4108	37.3	100	196.55
30830	4116.5	37.4	100	196.55
30831	4130	37.5	100	196.55
30832	4141	37.6	100	196.55
30833	4152.5	37.7	100	196.55
30834	4163.5	37.8	100	196.55
30835	4173.5	37.9	100	196.55
30836	4185	38	100	196.55
30837	4195.5	38.1	100	196.55
30838	4205.5	38.2	100	196.55
30839	4217.5	38.3	100	196.55
30840	4228.5	38.4	100	196.55
30841	4238	38.5	100	196.55
30842	4250.5	38.6	100	196.55
30843	4261	38.7	100	196.55

30844	4277.5	38.8	100	196.55
30845	4284	38.9	100	196.55
30846	4302	39	100	196.55
30847	4307	39.1	100	196.55
30848	4319.5	39.2	100	196.55
30849	4329	39.3	100	196.55
30850	4336.5	39.4	100	196.55
30851	4351.5	39.5	100	196.55
30852	4361	39.6	100	196.55
30853	4370.5	39.7	100	196.55
30854	4383.5	39.8	100	196.55
30855	4393	39.9	100	196.55
30856	4404.5	40	100	196.55
30857	4418.5	40.1	100	196.55
30858	4425	40.2	100	196.55
30859	4438	40.3	100	196.55
30860	4451.5	40.4	100	196.55
30861	4461.5	40.5	100	196.55
30862	4473	40.6	100	196.55
30863	4481.5	40.7	100	196.55
30864	4496.5	40.8	100	196.55
30865	4503	40.9	100	196.55
30866	4518.5	41	100	196.55
30867	4528.5	41.1	100	196.55
30868	4539	41.2	100	196.55
30869	4549.5	41.3	100	196.55
30870	4557	41.4	100	196.55
30871	4569.5	41.5	100	196.55
30872	4582.5	41.6	100	196.55
30873	4593.5	41.7	100	196.55
30874	4604.5	41.8	100	196.55
30875	4616	41.9	100	196.55
30876	4625.5	42	100	196.55
30877	4638	42.1	100	196.55
30878	4646.5	42.2	100	196.55
30879	4659	42.3	100	196.55
30880	4670	42.4	100	196.55
30881	4681.5	42.5	100	196.55
30882	4692.5	42.6	100	196.55
30883	4704	42.7	100	196.55
30884	4715.5	42.8	100	196.55
30885	4725.5	42.9	100	196.55

30886	4736.5	43	100	196.55
30887	4747.5	43.1	100	196.55
30888	4761	43.2	100	196.55
30889	4768	43.3	100	196.55
30890	4782.5	43.4	100	196.55
30891	4788.5	43.5	100	196.55
30892	4801	43.6	100	196.55
30893	4813	43.7	100	196.55
30894	4823.5	43.8	100	196.55
30895	4835	43.9	100	196.55
30896	4846.5	44	100	196.55
30897	4858	44.1	100	196.55
30898	4869.5	44.2	100	196.55
30899	4879	44.3	100	196.55
30900	4889	44.4	100	196.55
30901	4902	44.5	100	196.55
30902	4913.5	44.6	100	196.55
30903	4923.5	44.7	100	196.55
30904	4935.5	44.8	100	196.55
30905	4946.5	44.9	100	196.55
30906	4957	45	100	196.55
30907	4968.5	45.1	100	196.55
30908	4979.5	45.2	100	196.55
30909	4990	45.3	100	196.55
30910	5001.5	45.4	100	196.55
30911	5012	45.5	100	196.55
30912	5023	45.6	100	196.55
30913	5032	45.7	100	196.55
30914	5045	45.8	100	196.55
30915	5055	45.9	100	196.55
30916	5067	46	100	196.55
30917	5077.5	46.1	100	196.55
30918	5088.5	46.2	100	196.55
30919	5097.5	46.3	100	196.55
30920	5110.5	46.4	100	196.55
30921	5121.5	46.5	100	196.55
30922	5133	46.6	100	196.55
30923	5143.5	46.7	100	196.55
30924	5155	46.8	100	196.55
30925	5163.5	46.9	100	196.55
30926	5176	47	100	196.55
30927	5187.5	47.1	100	196.55

30928	5198	47.2	100	196.55
30929	5212	47.3	100	196.55
30930	5222.5	47.4	100	196.55
30931	5233	47.5	100	196.55
30932	5242.5	47.6	100	196.55
30933	5252.5	47.7	100	196.55
30934	5264	47.8	100	196.55
30935	5277.5	47.9	100	196.55
30936	5287.5	48	100	196.55
30937	5299	48.1	100	196.55
30938	5308	48.2	100	196.55
30939	5319.5	48.3	100	196.55
30940	5331.5	48.4	100	196.55
30941	5342	48.5	100	196.55
30942	5354	48.6	100	196.55
30943	5364.5	48.7	100	196.55
30944	5375	48.8	100	196.55
30945	5386	48.9	100	196.55
30946	5396	49	100	196.55
30947	5408	49.1	100	196.55
30948	5419	49.2	100	196.55
30949	5430	49.3	100	196.55
30950	5441.5	49.4	100	196.55
30951	5454.5	49.5	100	196.55
30952	5465.5	49.6	100	196.55
30953	5475	49.7	100	196.55
30954	5485.5	49.8	100	196.55
30955	5496	49.9	100	196.55
30956	5509	50	100	196.55
30957	5519.5	50.1	100	196.55
30958	5530.5	50.2	100	196.55
30959	5542.5	50.3	100	196.55
30960	5552.5	50.4	100	196.55
30961	5564.5	50.5	100	196.55
30962	5575	50.6	100	196.55
30963	5585	50.7	100	196.55
30964	5598	50.8	100	196.55
30965	5605	50.9	100	196.55
30966	5616	51	100	196.55
30967	5630	51.1	100	196.55
30968	5637.5	51.2	100	196.55
30969	5651.5	51.3	100	196.55

30970	5659.5	51.4	100	196.55
30971	5670.5	51.5	100	196.55
30972	5686	51.6	100	196.55
30973	5695	51.7	100	196.55
30974	5709	51.8	100	196.55
30975	5718.5	51.9	100	196.55
30976	5728.5	52	100	196.55
30977	5740.5	52.1	100	196.55
30978	5750	52.2	100	196.55
30979	5761.5	52.3	100	196.55
30980	5770.5	52.4	100	196.55
30981	5780	52.5	100	196.55
30982	5794.5	52.6	100	196.55
30983	5805	52.7	100	196.55
30984	5815.5	52.8	100	196.55
30985	5828.5	52.9	100	196.55
30986	5836.5	53	100	196.55
30987	5850	53.1	100	196.55
30988	5863.5	53.2	100	196.55
30989	5871.5	53.3	100	196.55
30990	5884	53.4	100	196.55
30991	5894.5	53.5	100	196.55
30992	5905.5	53.6	100	196.55
30993	5916.5	53.7	100	196.55
30994	5926	53.8	100	196.55
30995	5937.5	53.9	100	196.55
30996	5948	54	100	196.55
30997	5960.5	54.1	100	196.55
30998	5971	54.2	100	196.55
30999	5983	54.3	100	196.55
31000	5991.5	54.4	100	196.55
31001	6000	54.5	100	196.55
31602	0	0	200	196.55
31603	0.5	0.1	200	196.55
31604	6	0.2	200	196.55
31605	27	0.3	200	196.55
31606	59	0.4	200	196.55
31607	81	0.5	200	196.55
31608	102	0.6	200	196.55
31609	124.5	0.7	200	196.55
31610	146.5	0.8	200	196.55
31611	166.5	0.9	200	196.55

31612	190	1	200	196.55
31613	210.5	1.1	200	196.55
31614	237.5	1.2	200	196.55
31615	255.5	1.3	200	196.55
31616	271	1.4	200	196.55
31617	299	1.5	200	196.55
31618	322.5	1.6	200	196.55
31619	344	1.7	200	196.55
31620	361.5	1.8	200	196.55
31621	382	1.9	200	196.55
31622	408.5	2	200	196.55
31623	431.5	2.1	200	196.55
31624	455	2.2	200	196.55
31625	478	2.3	200	196.55
31626	501.5	2.4	200	196.55
31627	523	2.5	200	196.55
31628	545.5	2.6	200	196.55
31629	563.5	2.7	200	196.55
31630	587.5	2.8	200	196.55
31631	606	2.9	200	196.55
31632	627	3	200	196.55
31633	650.5	3.1	200	196.55
31634	675.5	3.2	200	196.55
31635	696	3.3	200	196.55
31636	721.5	3.4	200	196.55
31637	740.5	3.5	200	196.55
31638	763.5	3.6	200	196.55
31639	783.5	3.7	200	196.55
31640	806	3.8	200	196.55
31641	829.5	3.9	200	196.55
31642	849	4	200	196.55
31643	865	4.1	200	196.55
31644	894.5	4.2	200	196.55
31645	917.5	4.3	200	196.55
31646	940.5	4.4	200	196.55
31647	961	4.5	200	196.55
31648	985.5	4.6	200	196.55
31649	1007	4.7	200	196.55
31650	1027	4.8	200	196.55
31651	1048.5	4.9	200	196.55
31652	1070.5	5	200	196.55
31653	1092	5.1	200	196.55

31654	1114.5	5.2	200	196.55
31655	1137	5.3	200	196.55
31656	1158.5	5.4	200	196.55
31657	1181.5	5.5	200	196.55
31658	1203.5	5.6	200	196.55
31659	1216.5	5.7	200	196.55
31660	1238.5	5.8	200	196.55
31661	1260.5	5.9	200	196.55
31662	1281	6	200	196.55
31663	1306.5	6.1	200	196.55
31664	1325.5	6.2	200	196.55
31665	1347.5	6.3	200	196.55
31666	1371	6.4	200	196.55
31667	1389	6.5	200	196.55
31668	1410.5	6.6	200	196.55
31669	1436	6.7	200	196.55
31670	1466.5	6.8	200	196.55
31671	1485.5	6.9	200	196.55
31672	1511	7	200	196.55
31673	1533.5	7.1	200	196.55
31674	1555.5	7.2	200	196.55
31675	1576	7.3	200	196.55
31676	1595.5	7.4	200	196.55
31677	1614.5	7.5	200	196.55
31678	1635.5	7.6	200	196.55
31679	1665	7.7	200	196.55
31680	1687	7.8	200	196.55
31681	1710	7.9	200	196.55
31682	1730	8	200	196.55
31683	1746	8.1	200	196.55
31684	1765	8.2	200	196.55
31685	1786	8.3	200	196.55
31686	1812	8.4	200	196.55
31687	1835.5	8.5	200	196.55
31688	1854	8.6	200	196.55
31689	1878	8.7	200	196.55
31690	1902.5	8.8	200	196.55
31691	1930	8.9	200	196.55
31692	1951	9	200	196.55
31693	1971.5	9.1	200	196.55
31694	1991.5	9.2	200	196.55
31695	2002.5	9.3	200	196.55

31696	2030	9.4	200	196.55
31697	2049	9.5	200	196.55
31698	2084.5	9.6	200	196.55
31699	2105	9.7	200	196.55
31700	2126.5	9.8	200	196.55
31701	2151	9.9	200	196.55
31702	2169	10	200	196.55
31703	2192	10.1	200	196.55
31704	2218.5	10.2	200	196.55
31705	2238.5	10.3	200	196.55
31706	2258.5	10.4	200	196.55
31707	2281	10.5	200	196.55
31708	2304	10.6	200	196.55
31709	2327	10.7	200	196.55
31710	2347	10.8	200	196.55
31711	2367.5	10.9	200	196.55
31712	2393	11	200	196.55
31713	2413.5	11.1	200	196.55
31714	2435	11.2	200	196.55
31715	2459.5	11.3	200	196.55
31716	2481	11.4	200	196.55
31717	2502	11.5	200	196.55
31718	2528	11.6	200	196.55
31719	2548.5	11.7	200	196.55
31720	2571	11.8	200	196.55
31721	2593	11.9	200	196.55
31722	2613.5	12	200	196.55
31723	2636	12.1	200	196.55
31724	2656	12.2	200	196.55
31725	2678	12.3	200	196.55
31726	2705	12.4	200	196.55
31727	2726	12.5	200	196.55
31728	2746.5	12.6	200	196.55
31729	2770	12.7	200	196.55
31730	2790.5	12.8	200	196.55
31731	2809	12.9	200	196.55
31732	2829.5	13	200	196.55
31733	2858	13.1	200	196.55
31734	2878	13.2	200	196.55
31735	2900.5	13.3	200	196.55
31736	2921.5	13.4	200	196.55
31737	2944.5	13.5	200	196.55

31738	2968.5	13.6	200	196.55
31739	2989.5	13.7	200	196.55
31740	3010.5	13.8	200	196.55
31741	3034.5	13.9	200	196.55
31742	3053	14	200	196.55
31743	3073	14.1	200	196.55
31744	3099.5	14.2	200	196.55
31745	3123.5	14.3	200	196.55
31746	3142	14.4	200	196.55
31747	3166.5	14.5	200	196.55
31748	3188	14.6	200	196.55
31749	3212	14.7	200	196.55
31750	3231	14.8	200	196.55
31751	3254.5	14.9	200	196.55
31752	3273.5	15	200	196.55
31753	3298.5	15.1	200	196.55
31754	3321	15.2	200	196.55
31755	3340	15.3	200	196.55
31756	3365	15.4	200	196.55
31757	3386	15.5	200	196.55
31758	3404.5	15.6	200	196.55
31759	3418	15.7	200	196.55
31760	3451	15.8	200	196.55
31761	3469.5	15.9	200	196.55
31762	3491	16	200	196.55
31763	3515	16.1	200	196.55
31764	3539	16.2	200	196.55
31765	3562.5	16.3	200	196.55
31766	3577.5	16.4	200	196.55
31767	3600	16.5	200	196.55
31768	3612	16.6	200	196.55
31769	3650.5	16.7	200	196.55
31770	3673	16.8	200	196.55
31771	3694.5	16.9	200	196.55
31772	3717.5	17	200	196.55
31773	3740	17.1	200	196.55
31774	3760	17.2	200	196.55
31775	3782.5	17.3	200	196.55
31776	3806	17.4	200	196.55
31777	3825.5	17.5	200	196.55
31778	3850	17.6	200	196.55
31779	3869.5	17.7	200	196.55

31780	3891.5	17.8	200	196.55
31781	3915.5	17.9	200	196.55
31782	3937.5	18	200	196.55
31783	3960	18.1	200	196.55
31784	3981.5	18.2	200	196.55
31785	4004	18.3	200	196.55
31786	4027	18.4	200	196.55
31787	4047.5	18.5	200	196.55
31788	4072.5	18.6	200	196.55
31789	4093.5	18.7	200	196.55
31790	4113.5	18.8	200	196.55
31791	4136	18.9	200	196.55
31792	4157	19	200	196.55
31793	4179	19.1	200	196.55
31794	4202.5	19.2	200	196.55
31795	4225	19.3	200	196.55
31796	4245	19.4	200	196.55
31797	4264	19.5	200	196.55
31798	4284	19.6	200	196.55
31799	4311	19.7	200	196.55
31800	4334	19.8	200	196.55
31801	4357	19.9	200	196.55
31802	4376.5	20	200	196.55
31803	4399	20.1	200	196.55
31804	4422.5	20.2	200	196.55
31805	4443.5	20.3	200	196.55
31806	4466.5	20.4	200	196.55
31807	4486.5	20.5	200	196.55
31808	4508	20.6	200	196.55
31809	4526.5	20.7	200	196.55
31810	4551.5	20.8	200	196.55
31811	4576	20.9	200	196.55
31812	4597.5	21	200	196.55
31813	4617	21.1	200	196.55
31814	4640	21.2	200	196.55
31815	4662	21.3	200	196.55
31816	4686.5	21.4	200	196.55
31817	4709	21.5	200	196.55
31818	4732	21.6	200	196.55
31819	4751	21.7	200	196.55
31820	4770.5	21.8	200	196.55
31821	4793.5	21.9	200	196.55

31822	4817	22	200	196.55
31823	4841.5	22.1	200	196.55
31824	4861	22.2	200	196.55
31825	4884.5	22.3	200	196.55
31826	4906.5	22.4	200	196.55
31827	4928.5	22.5	200	196.55
31828	4950.5	22.6	200	196.55
31829	4973.5	22.7	200	196.55
31830	4994	22.8	200	196.55
31831	5013.5	22.9	200	196.55
31832	5038	23	200	196.55
31833	5059.5	23.1	200	196.55
31834	5080	23.2	200	196.55
31835	5101.5	23.3	200	196.55
31836	5124.5	23.4	200	196.55
31837	5149	23.5	200	196.55
31838	5172	23.6	200	196.55
31839	5191	23.7	200	196.55
31840	5214	23.8	200	196.55
31841	5236	23.9	200	196.55
31842	5252	24	200	196.55
31843	5279	24.1	200	196.55
31844	5303	24.2	200	196.55
31845	5321.5	24.3	200	196.55
31846	5341	24.4	200	196.55
31847	5366.5	24.5	200	196.55
31848	5391	24.6	200	196.55
31849	5414	24.7	200	196.55
31850	5434.5	24.8	200	196.55
31851	5458.5	24.9	200	196.55
31852	5479.5	25	200	196.55
31853	5501	25.1	200	196.55
31854	5521	25.2	200	196.55
31855	5542	25.3	200	196.55
31856	5563	25.4	200	196.55
31857	5587	25.5	200	196.55
31858	5608	25.6	200	196.55
31859	5632	25.7	200	196.55
31860	5656	25.8	200	196.55
31861	5678	25.9	200	196.55
31862	5700.5	26	200	196.55
31863	5718.5	26.1	200	196.55

31864	5741.5	26.2	200	196.55
31865	5766.5	26.3	200	196.55
31866	5792	26.4	200	196.55
31867	5807	26.5	200	196.55
31868	5830.5	26.6	200	196.55
31869	5846	26.7	200	196.55
31870	5866.5	26.8	200	196.55
31871	5888.5	26.9	200	196.55
31872	5914	27	200	196.55
31873	5938	27.1	200	196.55
31874	5963	27.2	200	196.55
31875	5981.5	27.3	200	196.55
31876	5999.5	27.4	200	196.55
31877	5999.5	27.5	200	196.55
31878	6000.5	27.6	200	196.55
31879	5999.5	27.7	200	196.55
31880	6000	27.8	200	196.55
32221	0	0	300	196.55
32222	0.5	0.1	300	196.55
32223	6	0.2	300	196.55
32224	48.5	0.3	300	196.55
32225	80	0.4	300	196.55
32226	114.5	0.5	300	196.55
32227	152	0.6	300	196.55
32228	179.5	0.7	300	196.55
32229	219	0.8	300	196.55
32230	251	0.9	300	196.55
32231	281.5	1	300	196.55
32232	312.5	1.1	300	196.55
32233	345	1.2	300	196.55
32234	377.5	1.3	300	196.55
32235	410	1.4	300	196.55
32236	442	1.5	300	196.55
32237	482	1.6	300	196.55
32238	514.5	1.7	300	196.55
32239	547	1.8	300	196.55
32240	576.5	1.9	300	196.55
32241	614	2	300	196.55
32242	642	2.1	300	196.55
32243	678.5	2.2	300	196.55
32244	712	2.3	300	196.55
32245	746	2.4	300	196.55

32246	777.5	2.5	300	196.55
32247	810	2.6	300	196.55
32248	841.5	2.7	300	196.55
32249	873	2.8	300	196.55
32250	910	2.9	300	196.55
32251	945.5	3	300	196.55
32252	977	3.1	300	196.55
32253	1010	3.2	300	196.55
32254	1042	3.3	300	196.55
32255	1074.5	3.4	300	196.55
32256	1107.5	3.5	300	196.55
32257	1138.5	3.6	300	196.55
32258	1174	3.7	300	196.55
32259	1208	3.8	300	196.55
32260	1241.5	3.9	300	196.55
32261	1275	4	300	196.55
32262	1307	4.1	300	196.55
32263	1340	4.2	300	196.55
32264	1365	4.3	300	196.55
32265	1404.5	4.4	300	196.55
32266	1435.5	4.5	300	196.55
32267	1470.5	4.6	300	196.55
32268	1502.5	4.7	300	196.55
32269	1538	4.8	300	196.55
32270	1569.5	4.9	300	196.55
32271	1601.5	5	300	196.55
32272	1635.5	5.1	300	196.55
32273	1670.5	5.2	300	196.55
32274	1701.5	5.3	300	196.55
32275	1733.5	5.4	300	196.55
32276	1768	5.5	300	196.55
32277	1802	5.6	300	196.55
32278	1834	5.7	300	196.55
32279	1864.5	5.8	300	196.55
32280	1900.5	5.9	300	196.55
32281	1934	6	300	196.55
32282	1968.5	6.1	300	196.55
32283	1998	6.2	300	196.55
32284	2034.5	6.3	300	196.55
32285	2067.5	6.4	300	196.55
32286	2098.5	6.5	300	196.55
32287	2134	6.6	300	196.55

32288	2166	6.7	300	196.55
32289	2199.5	6.8	300	196.55
32290	2234.5	6.9	300	196.55
32291	2266.5	7	300	196.55
32292	2302.5	7.1	300	196.55
32293	2332	7.2	300	196.55
32294	2365	7.3	300	196.55
32295	2402	7.4	300	196.55
32296	2430.5	7.5	300	196.55
32297	2464	7.6	300	196.55
32298	2497	7.7	300	196.55
32299	2530.5	7.8	300	196.55
32300	2563.5	7.9	300	196.55
32301	2598.5	8	300	196.55
32302	2631.5	8.1	300	196.55
32303	2662.5	8.2	300	196.55
32304	2696.5	8.3	300	196.55
32305	2732	8.4	300	196.55
32306	2761.5	8.5	300	196.55
32307	2793.5	8.6	300	196.55
32308	2830	8.7	300	196.55
32309	2860	8.8	300	196.55
32310	2886	8.9	300	196.55
32311	2924.5	9	300	196.55
32312	2959.5	9.1	300	196.55
32313	2994.5	9.2	300	196.55
32314	3026.5	9.3	300	196.55
32315	3059.5	9.4	300	196.55
32316	3091.5	9.5	300	196.55
32317	3126	9.6	300	196.55
32318	3157	9.7	300	196.55
32319	3189.5	9.8	300	196.55
32320	3223	9.9	300	196.55
32321	3256.5	10	300	196.55
32322	3293	10.1	300	196.55
32323	3326	10.2	300	196.55
32324	3358	10.3	300	196.55
32325	3390.5	10.4	300	196.55
32326	3424.5	10.5	300	196.55
32327	3455.5	10.6	300	196.55
32328	3487.5	10.7	300	196.55
32329	3522	10.8	300	196.55

32330	3556.5	10.9	300	196.55
32331	3591	11	300	196.55
32332	3622	11.1	300	196.55
32333	3653.5	11.2	300	196.55
32334	3685.5	11.3	300	196.55
32335	3713.5	11.4	300	196.55
32336	3753.5	11.5	300	196.55
32337	3787.5	11.6	300	196.55
32338	3823.5	11.7	300	196.55
32339	3856.5	11.8	300	196.55
32340	3886.5	11.9	300	196.55
32341	3919	12	300	196.55
32342	3951	12.1	300	196.55
32343	3979	12.2	300	196.55
32344	4016.5	12.3	300	196.55
32345	4052.5	12.4	300	196.55
32346	4087	12.5	300	196.55
32347	4117.5	12.6	300	196.55
32348	4151.5	12.7	300	196.55
32349	4182	12.8	300	196.55
32350	4214	12.9	300	196.55
32351	4252	13	300	196.55
32352	4282.5	13.1	300	196.55
32353	4315.5	13.2	300	196.55
32354	4348	13.3	300	196.55
32355	4381.5	13.4	300	196.55
32356	4415	13.5	300	196.55
32357	4447	13.6	300	196.55
32358	4480	13.7	300	196.55
32359	4511.5	13.8	300	196.55
32360	4547.5	13.9	300	196.55
32361	4580.5	14	300	196.55
32362	4614.5	14.1	300	196.55
32363	4648.5	14.2	300	196.55
32364	4678	14.3	300	196.55
32365	4713	14.4	300	196.55
32366	4747.5	14.5	300	196.55
32367	4779	14.6	300	196.55
32368	4814.5	14.7	300	196.55
32369	4847	14.8	300	196.55
32370	4880.5	14.9	300	196.55
32371	4911	15	300	196.55

32372	4943	15.1	300	196.55
32373	4977.5	15.2	300	196.55
32374	5008.5	15.3	300	196.55
32375	5042.5	15.4	300	196.55
32376	5078.5	15.5	300	196.55
32377	5108	15.6	300	196.55
32378	5139.5	15.7	300	196.55
32379	5174.5	15.8	300	196.55
32380	5209	15.9	300	196.55
32381	5239.5	16	300	196.55
32382	5271.5	16.1	300	196.55
32383	5308.5	16.2	300	196.55
32384	5336	16.3	300	196.55
32385	5372.5	16.4	300	196.55
32386	5407.5	16.5	300	196.55
32387	5441	16.6	300	196.55
32388	5472	16.7	300	196.55
32389	5504.5	16.8	300	196.55
32390	5536.5	16.9	300	196.55
32391	5569	17	300	196.55
32392	5600.5	17.1	300	196.55
32393	5637	17.2	300	196.55
32394	5674	17.3	300	196.55
32395	5702.5	17.4	300	196.55
32396	5739.5	17.5	300	196.55
32397	5770.5	17.6	300	196.55
32398	5803	17.7	300	196.55
32399	5837	17.8	300	196.55
32400	5869.5	17.9	300	196.55
32401	5902.5	18	300	196.55
32402	5932	18.1	300	196.55
32403	5969	18.2	300	196.55
32404	6000.5	18.3	300	196.55
32664	0	0	400	196.55
32665	0.5	0.1	400	196.55
32666	13	0.2	400	196.55
32667	92	0.3	400	196.55
32668	113.5	0.4	400	196.55
32669	163	0.5	400	196.55
32670	213	0.6	400	196.55
32671	252.5	0.7	400	196.55
32672	299	0.8	400	196.55

32673	339.5	0.9	400	196.55
32674	384.5	1	400	196.55
32675	433	1.1	400	196.55
32676	475.5	1.2	400	196.55
32677	520.5	1.3	400	196.55
32678	560.5	1.4	400	196.55
32679	605.5	1.5	400	196.55
32680	650.5	1.6	400	196.55
32681	696	1.7	400	196.55
32682	740	1.8	400	196.55
32683	782.5	1.9	400	196.55
32684	830	2	400	196.55
32685	865	2.1	400	196.55
32686	913	2.2	400	196.55
32687	964	2.3	400	196.55
32688	1003	2.4	400	196.55
32689	1046.5	2.5	400	196.55
32690	1093.5	2.6	400	196.55
32691	1135.5	2.7	400	196.55
32692	1177	2.8	400	196.55
32693	1226	2.9	400	196.55
32694	1262	3	400	196.55
32695	1312	3.1	400	196.55
32696	1356.5	3.2	400	196.55
32697	1398	3.3	400	196.55
32698	1445.5	3.4	400	196.55
32699	1489	3.5	400	196.55
32700	1534	3.6	400	196.55
32701	1576	3.7	400	196.55
32702	1619.5	3.8	400	196.55
32703	1663.5	3.9	400	196.55
32704	1708.5	4	400	196.55
32705	1753.5	4.1	400	196.55
32706	1799.5	4.2	400	196.55
32707	1843.5	4.3	400	196.55
32708	1886	4.4	400	196.55
32709	1929	4.5	400	196.55
32710	1973.5	4.6	400	196.55
32711	2018	4.7	400	196.55
32712	2061.5	4.8	400	196.55
32713	2106	4.9	400	196.55
32714	2149.5	5	400	196.55

32715	2195.5	5.1	400	196.55
32716	2238.5	5.2	400	196.55
32717	2282	5.3	400	196.55
32718	2326	5.4	400	196.55
32719	2371	5.5	400	196.55
32720	2415	5.6	400	196.55
32721	2457.5	5.7	400	196.55
32722	2499	5.8	400	196.55
32723	2545	5.9	400	196.55
32724	2593	6	400	196.55
32725	2635.5	6.1	400	196.55
32726	2677	6.2	400	196.55
32727	2722	6.3	400	196.55
32728	2765	6.4	400	196.55
32729	2813	6.5	400	196.55
32730	2858.5	6.6	400	196.55
32731	2897	6.7	400	196.55
32732	2939.5	6.8	400	196.55
32733	2984.5	6.9	400	196.55
32734	3027	7	400	196.55
32735	3074.5	7.1	400	196.55
32736	3121.5	7.2	400	196.55
32737	3162.5	7.3	400	196.55
32738	3208	7.4	400	196.55
32739	3253.5	7.5	400	196.55
32740	3297.5	7.6	400	196.55
32741	3340.5	7.7	400	196.55
32742	3383.5	7.8	400	196.55
32743	3428.5	7.9	400	196.55
32744	3471	8	400	196.55
32745	3514	8.1	400	196.55
32746	3560.5	8.2	400	196.55
32747	3606	8.3	400	196.55
32748	3649.5	8.4	400	196.55
32749	3692	8.5	400	196.55
32750	3739.5	8.6	400	196.55
32751	3781	8.7	400	196.55
32752	3824.5	8.8	400	196.55
32753	3868	8.9	400	196.55
32754	3912	9	400	196.55
32755	3952	9.1	400	196.55
32756	4002.5	9.2	400	196.55

32757	4043	9.3	400	196.55
32758	4089	9.4	400	196.55
32759	4135	9.5	400	196.55
32760	4176.5	9.6	400	196.55
32761	4218.5	9.7	400	196.55
32762	4264.5	9.8	400	196.55
32763	4309.5	9.9	400	196.55
32764	4359	10	400	196.55
32765	4397.5	10.1	400	196.55
32766	4440	10.2	400	196.55
32767	4484	10.3	400	196.55
32768	4530	10.4	400	196.55
32769	4572.5	10.5	400	196.55
32770	4621	10.6	400	196.55
32771	4662	10.7	400	196.55
32772	4698	10.8	400	196.55
32773	4748	10.9	400	196.55
32774	4790	11	400	196.55
32775	4839.5	11.1	400	196.55
32776	4874	11.2	400	196.55
32777	4914	11.3	400	196.55
32778	4972	11.4	400	196.55
32779	5017	11.5	400	196.55
32780	5063	11.6	400	196.55
32781	5104.5	11.7	400	196.55
32782	5130.5	11.8	400	196.55
32783	5190	11.9	400	196.55
32784	5234	12	400	196.55
32785	5278	12.1	400	196.55
32786	5318	12.2	400	196.55
32787	5364.5	12.3	400	196.55
32788	5408.5	12.4	400	196.55
32789	5454.5	12.5	400	196.55
32790	5498.5	12.6	400	196.55
32791	5544.5	12.7	400	196.55
32792	5586	12.8	400	196.55
32793	5633.5	12.9	400	196.55
32794	5677.5	13	400	196.55
32795	5719.5	13.1	400	196.55
32796	5768	13.2	400	196.55
32797	5806	13.3	400	196.55
32798	5853.5	13.4	400	196.55

32799	5901	13.5	400	196.55
32800	5942.5	13.6	400	196.55
32801	5985.5	13.7	400	196.55
32802	6002.5	13.8	400	196.55
32803	6005.5	13.9	400	196.55
32804	6006	14	400	196.55
32805	6006	14.1	400	196.55
32806	6007	14.2	400	196.55
32807	6007	14.3	400	196.55
32808	6006.5	14.4	400	196.55
32809	6009	14.5	400	196.55
32810	6006	14.6	400	196.55
32811	6005	14.7	400	196.55
32812	6000.5	14.8	400	196.55
32813	5999.5	14.9	400	196.55
32814	6000	15	400	196.55
27055	0	0	500	196.55
27056	0.5	0.1	500	196.55
27057	0.5	0.2	500	196.55
27058	52	0.3	500	196.55
27059	101.5	0.4	500	196.55
27060	158	0.5	500	196.55
27061	215.5	0.6	500	196.55
27062	265.5	0.7	500	196.55
27063	319.5	0.8	500	196.55
27064	378.5	0.9	500	196.55
27065	436.5	1	500	196.55
27066	487	1.1	500	196.55
27067	546	1.2	500	196.55
27068	598	1.3	500	196.55
27069	656.5	1.4	500	196.55
27070	710.5	1.5	500	196.55
27071	760.5	1.6	500	196.55
27072	819	1.7	500	196.55
27073	877.5	1.8	500	196.55
27074	931.5	1.9	500	196.55
27075	984	2	500	196.55
27076	1039	2.1	500	196.55
27077	1093.5	2.2	500	196.55
27078	1150	2.3	500	196.55
27079	1203	2.4	500	196.55
27080	1259.5	2.5	500	196.55

27081	1318	2.6	500	196.55
27082	1371.5	2.7	500	196.55
27083	1428	2.8	500	196.55
27084	1482	2.9	500	196.55
27085	1535	3	500	196.55
27086	1591	3.1	500	196.55
27087	1647.5	3.2	500	196.55
27088	1700.5	3.3	500	196.55
27089	1758.5	3.4	500	196.55
27090	1812	3.5	500	196.55
27091	1865	3.6	500	196.55
27092	1920.5	3.7	500	196.55
27093	1979	3.8	500	196.55
27094	2032	3.9	500	196.55
27095	2088	4	500	196.55
27096	2140	4.1	500	196.55
27097	2194.5	4.2	500	196.55
27098	2252	4.3	500	196.55
27099	2305	4.4	500	196.55
27100	2359.5	4.5	500	196.55
27101	2415.5	4.6	500	196.55
27102	2474.5	4.7	500	196.55
27103	2525.5	4.8	500	196.55
27104	2579.5	4.9	500	196.55
27105	2636.5	5	500	196.55
27106	2689	5.1	500	196.55
27107	2745	5.2	500	196.55
27108	2800	5.3	500	196.55
27109	2857.5	5.4	500	196.55
27110	2909.5	5.5	500	196.55
27111	2967	5.6	500	196.55
27112	3020.5	5.7	500	196.55
27113	3074	5.8	500	196.55
27114	3129	5.9	500	196.55
27115	3185	6	500	196.55
27116	3239.5	6.1	500	196.55
27117	3296	6.2	500	196.55
27118	3352.5	6.3	500	196.55
27119	3406	6.4	500	196.55
27120	3460	6.5	500	196.55
27121	3517	6.6	500	196.55
27122	3566.5	6.7	500	196.55

27123	3626	6.8	500	196.55
27124	3677.5	6.9	500	196.55
27125	3736.5	7	500	196.55
27126	3787	7.1	500	196.55
27127	3842	7.2	500	196.55
27128	3898.5	7.3	500	196.55
27129	3950.5	7.4	500	196.55
27130	4012	7.5	500	196.55
27131	4066	7.6	500	196.55
27132	4117.5	7.7	500	196.55
27133	4174.5	7.8	500	196.55
27134	4231.5	7.9	500	196.55
27135	4285.5	8	500	196.55
27136	4340.5	8.1	500	196.55
27137	4393.5	8.2	500	196.55
27138	4451	8.3	500	196.55
27139	4503.5	8.4	500	196.55
27140	4562.5	8.5	500	196.55
27141	4612	8.6	500	196.55
27142	4670	8.7	500	196.55
27143	4725	8.8	500	196.55
27144	4780	8.9	500	196.55
27145	4833.5	9	500	196.55
27146	4889.5	9.1	500	196.55
27147	4941.5	9.2	500	196.55
27148	5001	9.3	500	196.55
27149	5054	9.4	500	196.55
27150	5110	9.5	500	196.55
27151	5165	9.6	500	196.55
27152	5221.5	9.7	500	196.55
27153	5279.5	9.8	500	196.55
27154	5327.5	9.9	500	196.55
27155	5386.5	10	500	196.55
27156	5439.5	10.1	500	196.55
27157	5498.5	10.2	500	196.55
27158	5553	10.3	500	196.55
27159	5608.5	10.4	500	196.55
27160	5667	10.5	500	196.55
27161	5717	10.6	500	196.55
27162	5773	10.7	500	196.55
27163	5827.5	10.8	500	196.55
27164	5880	10.9	500	196.55

27165	5938.5	11	500	196.55
27166	5994	11.1	500	196.55
27167	6006	11.2	500	196.55
27168	6007.5	11.3	500	196.55
27169	6008.5	11.4	500	196.55
27170	6008.5	11.5	500	196.55
27171	6009	11.6	500	196.55
27172	6009	11.7	500	196.55
27173	6009	11.8	500	196.55
27174	6002.5	11.9	500	196.55
27175	5994.5	12	500	196.55
27176	5993	12.1	500	196.55
27177	5992.5	12.2	500	196.55
27178	5992	12.3	500	196.55
27179	5992	12.4	500	196.55
27180	5991.5	12.5	500	196.55
27181	5991.5	12.6	500	196.55
27182	5993.5	12.7	500	196.55
27183	5998.5	12.8	500	196.55
27184	6000.5	12.9	500	196.55
27185	6001	13	500	196.55
27186	6000	13.1	500	196.55
27350	0	0	600	196.55
27351	0.5	0.1	600	196.55
27352	47	0.2	600	196.55
27353	95	0.3	600	196.55
27354	164	0.4	600	196.55
27355	233.5	0.5	600	196.55
27356	295.5	0.6	600	196.55
27357	364	0.7	600	196.55
27358	427	0.8	600	196.55
27359	499	0.9	600	196.55
27360	563	1	600	196.55
27361	631	1.1	600	196.55
27362	691	1.2	600	196.55
27363	762	1.3	600	196.55
27364	825	1.4	600	196.55
27365	894.5	1.5	600	196.55
27366	960.5	1.6	600	196.55
27367	1025.5	1.7	600	196.55
27368	1088	1.8	600	196.55
27369	1156.5	1.9	600	196.55

27370	1221	2	600	196.55
27371	1290	2.1	600	196.55
27372	1359	2.2	600	196.55
27373	1424.5	2.3	600	196.55
27374	1487	2.4	600	196.55
27375	1553.5	2.5	600	196.55
27376	1616	2.6	600	196.55
27377	1687.5	2.7	600	196.55
27378	1753	2.8	600	196.55
27379	1817	2.9	600	196.55
27380	1884.5	3	600	196.55
27381	1949.5	3.1	600	196.55
27382	2014.5	3.2	600	196.55
27383	2079.5	3.3	600	196.55
27384	2147.5	3.4	600	196.55
27385	2211	3.5	600	196.55
27386	2280	3.6	600	196.55
27387	2346	3.7	600	196.55
27388	2410.5	3.8	600	196.55
27389	2474.5	3.9	600	196.55
27390	2542	4	600	196.55
27391	2609.5	4.1	600	196.55
27392	2673	4.2	600	196.55
27393	2741.5	4.3	600	196.55
27394	2805.5	4.4	600	196.55
27395	2872.5	4.5	600	196.55
27396	2938	4.6	600	196.55
27397	3003	4.7	600	196.55
27398	3068	4.8	600	196.55
27399	3135	4.9	600	196.55
27400	3202	5	600	196.55
27401	3268.5	5.1	600	196.55
27402	3332.5	5.2	600	196.55
27403	3401	5.3	600	196.55
27404	3467	5.4	600	196.55
27405	3535	5.5	600	196.55
27406	3593.5	5.6	600	196.55
27407	3660	5.7	600	196.55
27408	3729.5	5.8	600	196.55
27409	3791	5.9	600	196.55
27410	3862.5	6	600	196.55
27411	3927.5	6.1	600	196.55

27412	3995	6.2	600	196.55
27413	4060.5	6.3	600	196.55
27414	4124.5	6.4	600	196.55
27415	4193.5	6.5	600	196.55
27416	4260.5	6.6	600	196.55
27417	4322	6.7	600	196.55
27418	4388.5	6.8	600	196.55
27419	4456.5	6.9	600	196.55
27420	4524.5	7	600	196.55
27421	4587	7.1	600	196.55
27422	4653	7.2	600	196.55
27423	4720	7.3	600	196.55
27424	4786	7.4	600	196.55
27425	4848	7.5	600	196.55
27426	4917	7.6	600	196.55
27427	4985.5	7.7	600	196.55
27428	5052	7.8	600	196.55
27429	5118	7.9	600	196.55
27430	5183.5	8	600	196.55
27431	5248	8.1	600	196.55
27432	5316.5	8.2	600	196.55
27433	5381	8.3	600	196.55
27434	5447.5	8.4	600	196.55
27435	5515.5	8.5	600	196.55
27436	5578.5	8.6	600	196.55
27437	5645	8.7	600	196.55
27438	5708.5	8.8	600	196.55
27439	5776	8.9	600	196.55
27440	5841	9	600	196.55
27441	5910.5	9.1	600	196.55
27442	5975	9.2	600	196.55
27443	6006	9.3	600	196.55
27444	6008.5	9.4	600	196.55
27445	6009	9.5	600	196.55
27446	6009.5	9.6	600	196.55
27447	6010	9.7	600	196.55
27448	6010	9.8	600	196.55
27449	6008.5	9.9	600	196.55
27450	6007.5	10	600	196.55
27451	6007.5	10.1	600	196.55
27452	5996.5	10.2	600	196.55
27453	5994.5	10.3	600	196.55

27454	5994	10.4	600	196.55
27455	5993	10.5	600	196.55
27456	5992.5	10.6	600	196.55
27457	5993	10.7	600	196.55
27458	5992.5	10.8	600	196.55
27459	5992	10.9	600	196.55
27460	5993.5	11	600	196.55
27461	5995	11.1	600	196.55
27462	5998.5	11.2	600	196.55
27463	6000.5	11.3	600	196.55
27464	6000	11.4	600	196.55
27626	0.5	0	700	196.55
27627	73	0.1	700	196.55
27628	86	0.2	700	196.55
27629	162	0.3	700	196.55
27630	236	0.4	700	196.55
27631	316	0.5	700	196.55
27632	388.5	0.6	700	196.55
27633	468	0.7	700	196.55
27634	545.5	0.8	700	196.55
27635	626	0.9	700	196.55
27636	701.5	1	700	196.55
27637	781.5	1.1	700	196.55
27638	859	1.2	700	196.55
27639	930.5	1.3	700	196.55
27640	1008	1.4	700	196.55
27641	1083.5	1.5	700	196.55
27642	1161.5	1.6	700	196.55
27643	1239	1.7	700	196.55
27644	1317.5	1.8	700	196.55
27645	1396	1.9	700	196.55
27646	1470.5	2	700	196.55
27647	1549	2.1	700	196.55
27648	1627.5	2.2	700	196.55
27649	1702	2.3	700	196.55
27650	1778.5	2.4	700	196.55
27651	1854	2.5	700	196.55
27652	1931	2.6	700	196.55
27653	2015	2.7	700	196.55
27654	2086.5	2.8	700	196.55
27655	2163.5	2.9	700	196.55
27656	2242	3	700	196.55

27657	2318	3.1	700	196.55
27658	2395.5	3.2	700	196.55
27659	2472	3.3	700	196.55
27660	2548.5	3.4	700	196.55
27661	2624	3.5	700	196.55
27662	2701	3.6	700	196.55
27663	2781.5	3.7	700	196.55
27664	2855.5	3.8	700	196.55
27665	2933	3.9	700	196.55
27666	3013	4	700	196.55
27667	3088.5	4.1	700	196.55
27668	3167.5	4.2	700	196.55
27669	3240	4.3	700	196.55
27670	3320.5	4.4	700	196.55
27671	3394	4.5	700	196.55
27672	3473	4.6	700	196.55
27673	3550	4.7	700	196.55
27674	3621.5	4.8	700	196.55
27675	3703	4.9	700	196.55
27676	3777	5	700	196.55
27677	3857	5.1	700	196.55
27678	3932.5	5.2	700	196.55
27679	4009	5.3	700	196.55
27680	4091	5.4	700	196.55
27681	4164	5.5	700	196.55
27682	4244	5.6	700	196.55
27683	4321	5.7	700	196.55
27684	4399.5	5.8	700	196.55
27685	4477	5.9	700	196.55
27686	4551	6	700	196.55
27687	4625.5	6.1	700	196.55
27688	4701	6.2	700	196.55
27689	4785.5	6.3	700	196.55
27690	4857.5	6.4	700	196.55
27691	4935.5	6.5	700	196.55
27692	5015	6.6	700	196.55
27693	5089.5	6.7	700	196.55
27694	5167	6.8	700	196.55
27695	5240.5	6.9	700	196.55
27696	5321	7	700	196.55
27697	5399	7.1	700	196.55
27698	5479	7.2	700	196.55

27699	5552.5	7.3	700	196.55
27700	5634	7.4	700	196.55
27701	5710.5	7.5	700	196.55
27702	5786.5	7.6	700	196.55
27703	5860	7.7	700	196.55
27704	5940	7.8	700	196.55
27705	6003.5	7.9	700	196.55
27706	6006.5	8	700	196.55
27707	6007.5	8.1	700	196.55
27708	6008	8.2	700	196.55
27709	6008.5	8.3	700	196.55
27710	6009	8.4	700	196.55
27711	6009	8.5	700	196.55
27712	6008.5	8.6	700	196.55
27713	6002.5	8.7	700	196.55
27714	5997	8.8	700	196.55
27715	5996	8.9	700	196.55
27716	5995.5	9	700	196.55
27717	5995	9.1	700	196.55
27718	5995	9.2	700	196.55
27719	5995	9.3	700	196.55
27720	5995	9.4	700	196.55
27721	5994.5	9.5	700	196.55
27722	5994.5	9.6	700	196.55
27723	5995	9.7	700	196.55
27724	5996	9.8	700	196.55
27725	5997.5	9.9	700	196.55
27726	6000	10	700	196.55
27854	0	0	800	196.55
27855	0.5	0.1	800	196.55
27856	62	0.2	800	196.55
27857	142.5	0.3	800	196.55
27858	229	0.4	800	196.55
27859	318.5	0.5	800	196.55
27860	406.5	0.6	800	196.55
27861	493	0.7	800	196.55
27862	589	0.8	800	196.55
27863	676	0.9	800	196.55
27864	756.5	1	800	196.55
27865	846.5	1.1	800	196.55
27866	939.5	1.2	800	196.55
27867	1029.5	1.3	800	196.55

27868	1112.5	1.4	800	196.55
27869	1199	1.5	800	196.55
27870	1292	1.6	800	196.55
27871	1376	1.7	800	196.55
27872	1463.5	1.8	800	196.55
27873	1552	1.9	800	196.55
27874	1644	2	800	196.55
27875	1727.5	2.1	800	196.55
27876	1816	2.2	800	196.55
27877	1906	2.3	800	196.55
27878	1993.5	2.4	800	196.55
27879	2079	2.5	800	196.55
27880	2168	2.6	800	196.55
27881	2257	2.7	800	196.55
27882	2346	2.8	800	196.55
27883	2433.5	2.9	800	196.55
27884	2518.5	3	800	196.55
27885	2604.5	3.1	800	196.55
27886	2693	3.2	800	196.55
27887	2783	3.3	800	196.55
27888	2868	3.4	800	196.55
27889	2958.5	3.5	800	196.55
27890	3051.5	3.6	800	196.55
27891	3136.5	3.7	800	196.55
27892	3223.5	3.8	800	196.55
27893	3308.5	3.9	800	196.55
27894	3398	4	800	196.55
27895	3489	4.1	800	196.55
27896	3573	4.2	800	196.55
27897	3661.5	4.3	800	196.55
27898	3757.5	4.4	800	196.55
27899	3838.5	4.5	800	196.55
27900	3927.5	4.6	800	196.55
27901	4015.5	4.7	800	196.55
27902	4108.5	4.8	800	196.55
27903	4186.5	4.9	800	196.55
27904	4271.5	5	800	196.55
27905	4362	5.1	800	196.55
27906	4435	5.2	800	196.55
27907	4546	5.3	800	196.55
27908	4614	5.4	800	196.55
27909	4715.5	5.5	800	196.55

27910	4807	5.6	800	196.55
27911	4885	5.7	800	196.55
27912	4981	5.8	800	196.55
27913	5071	5.9	800	196.55
27914	5159	6	800	196.55
27915	5246.5	6.1	800	196.55
27916	5337.5	6.2	800	196.55
27917	5427	6.3	800	196.55
27918	5513	6.4	800	196.55
27919	5600.5	6.5	800	196.55
27920	5691	6.6	800	196.55
27921	5779.5	6.7	800	196.55
27922	5872	6.8	800	196.55
27923	5962	6.9	800	196.55
27924	6006	7	800	196.55
27925	6009	7.1	800	196.55
27926	6010	7.2	800	196.55
27927	6010.5	7.3	800	196.55
27928	6011.5	7.4	800	196.55
27929	6011.5	7.5	800	196.55
27930	6009.5	7.6	800	196.55
27931	5994.5	7.7	800	196.55
27932	5993	7.8	800	196.55
27933	5993	7.9	800	196.55
27934	5992	8	800	196.55
27935	5992	8.1	800	196.55
27936	5992	8.2	800	196.55
27937	5992	8.3	800	196.55
27938	5994	8.4	800	196.55
27939	5998	8.5	800	196.55
27940	5999.5	8.6	800	196.55
27941	6000	8.7	800	196.55
28071	0	0	900	196.55
28072	0.5	0.1	900	196.55
28073	50	0.2	900	196.55
28074	125	0.3	900	196.55
28075	222.5	0.4	900	196.55
28076	323.5	0.5	900	196.55
28077	416	0.6	900	196.55
28078	517	0.7	900	196.55
28079	617	0.8	900	196.55
28080	718.5	0.9	900	196.55

28081	816.5	1	900	196.55
28082	917	1.1	900	196.55
28083	1015.5	1.2	900	196.55
28084	1118	1.3	900	196.55
28085	1216	1.4	900	196.55
28086	1314.5	1.5	900	196.55
28087	1412	1.6	900	196.55
28088	1516.5	1.7	900	196.55
28089	1611.5	1.8	900	196.55
28090	1709.5	1.9	900	196.55
28091	1808	2	900	196.55
28092	1909.5	2.1	900	196.55
28093	2008	2.2	900	196.55
28094	2106.5	2.3	900	196.55
28095	2207	2.4	900	196.55
28096	2308.5	2.5	900	196.55
28097	2406	2.6	900	196.55
28098	2498.5	2.7	900	196.55
28099	2600	2.8	900	196.55
28100	2703.5	2.9	900	196.55
28101	2798.5	3	900	196.55
28102	2901	3.1	900	196.55
28103	2998	3.2	900	196.55
28104	3095.5	3.3	900	196.55
28105	3199.5	3.4	900	196.55
28106	3295	3.5	900	196.55
28107	3394	3.6	900	196.55
28108	3494	3.7	900	196.55
28109	3594.5	3.8	900	196.55
28110	3689	3.9	900	196.55
28111	3793	4	900	196.55
28112	3894.5	4.1	900	196.55
28113	3996	4.2	900	196.55
28114	4093	4.3	900	196.55
28115	4183.5	4.4	900	196.55
28116	4289	4.5	900	196.55
28117	4380	4.6	900	196.55
28118	4485	4.7	900	196.55
28119	4584.5	4.8	900	196.55
28120	4691	4.9	900	196.55
28121	4782	5	900	196.55
28122	4883	5.1	900	196.55

28123	4989.5	5.2	900	196.55
28124	5091	5.3	900	196.55
28125	5186	5.4	900	196.55
28126	5284	5.5	900	196.55
28127	5378.5	5.6	900	196.55
28128	5487	5.7	900	196.55
28129	5588.5	5.8	900	196.55
28130	5682.5	5.9	900	196.55
28131	5783	6	900	196.55
28132	5885.5	6.1	900	196.55
28133	5981.5	6.2	900	196.55
28134	6008	6.3	900	196.55
28135	6009.5	6.4	900	196.55
28136	6010	6.5	900	196.55
28137	6010.5	6.6	900	196.55
28138	6010.5	6.7	900	196.55
28139	6010.5	6.8	900	196.55
28140	6004.5	6.9	900	196.55
28141	5997	7	900	196.55
28142	5995.5	7.1	900	196.55
28143	5995.5	7.2	900	196.55
28144	5994.5	7.3	900	196.55
28145	5995	7.4	900	196.55
28146	5994.5	7.5	900	196.55
28147	5994	7.6	900	196.55
28148	5994	7.7	900	196.55
28149	5994.5	7.8	900	196.55
28150	5995.5	7.9	900	196.55
28151	5998.5	8	900	196.55
28152	6000.5	8.1	900	196.55
28153	6000	8.2	900	196.55
33435	0	0	1000	196.55
33436	0.5	0.1	1000	196.55
33437	48	0.2	1000	196.55
33438	144	0.3	1000	196.55
33439	251.5	0.4	1000	196.55
33440	358	0.5	1000	196.55
33441	475	0.6	1000	196.55
33442	586	0.7	1000	196.55
33443	694	0.8	1000	196.55
33444	807.5	0.9	1000	196.55
33445	912	1	1000	196.55

33446	1023	1.1	1000	196.55
33447	1133	1.2	1000	196.55
33448	1255.5	1.3	1000	196.55
33449	1354	1.4	1000	196.55
33450	1468.5	1.5	1000	196.55
33451	1578	1.6	1000	196.55
33452	1684.5	1.7	1000	196.55
33453	1801.5	1.8	1000	196.55
33454	1907	1.9	1000	196.55
33455	2023.5	2	1000	196.55
33456	2132	2.1	1000	196.55
33457	2242	2.2	1000	196.55
33458	2356.5	2.3	1000	196.55
33459	2470	2.4	1000	196.55
33460	2579	2.5	1000	196.55
33461	2687	2.6	1000	196.55
33462	2798	2.7	1000	196.55
33463	2908.5	2.8	1000	196.55
33464	3023.5	2.9	1000	196.55
33465	3128	3	1000	196.55
33466	3240.5	3.1	1000	196.55
33467	3353.5	3.2	1000	196.55
33468	3460	3.3	1000	196.55
33469	3575.5	3.4	1000	196.55
33470	3683	3.5	1000	196.55
33471	3796	3.6	1000	196.55
33472	3904.5	3.7	1000	196.55
33473	4011	3.8	1000	196.55
33474	4124	3.9	1000	196.55
33475	4238	4	1000	196.55
33476	4346	4.1	1000	196.55
33477	4452	4.2	1000	196.55
33478	4568	4.3	1000	196.55
33479	4683	4.4	1000	196.55
33480	4795	4.5	1000	196.55
33481	4897	4.6	1000	196.55
33482	5007	4.7	1000	196.55
33483	5117.5	4.8	1000	196.55
33484	5229.5	4.9	1000	196.55
33485	5336	5	1000	196.55
33486	5454.5	5.1	1000	196.55
33487	5559.5	5.2	1000	196.55

33488	5676	5.3	1000	196.55
33489	5784	5.4	1000	196.55
33490	5892	5.5	1000	196.55
33491	6002.5	5.6	1000	196.55
33598	0	0	2000	196.55
33599	10.5	0.1	2000	196.55
33600	96.5	0.2	2000	196.55
33601	230.5	0.3	2000	196.55
33602	397	0.4	2000	196.55
33603	628	0.5	2000	196.55
33604	836	0.6	2000	196.55
33605	1060.5	0.7	2000	196.55
33606	1279	0.8	2000	196.55
33607	1487.5	0.9	2000	196.55
33608	1716	1	2000	196.55
33609	1938	1.1	2000	196.55
33610	2159.5	1.2	2000	196.55
33611	2387	1.3	2000	196.55
33612	2602.5	1.4	2000	196.55
33613	2837.5	1.5	2000	196.55
33614	3067	1.6	2000	196.55
33615	3280	1.7	2000	196.55
33616	3486.5	1.8	2000	196.55
33617	3719.5	1.9	2000	196.55
33618	3950.5	2	2000	196.55
33619	4173	2.1	2000	196.55
33620	4377.5	2.2	2000	196.55
33621	4596.5	2.3	2000	196.55
33622	4823	2.4	2000	196.55
33623	5044	2.5	2000	196.55
33624	5264	2.6	2000	196.55
33625	5483.5	2.7	2000	196.55
33626	5724.5	2.8	2000	196.55
33627	5915.5	2.9	2000	196.55
33628	6003	3	2000	196.55
33629	6003.5	3.1	2000	196.55
33630	6004.5	3.2	2000	196.55
33631	6004.5	3.3	2000	196.55
33632	6004.5	3.4	2000	196.55
33633	6004.5	3.5	2000	196.55
33634	6004.5	3.6	2000	196.55
33635	6005	3.7	2000	196.55

33636	6005	3.8	2000	196.55
33637	6004.5	3.9	2000	196.55
33638	6004.5	4	2000	196.55
33639	5998	4.1	2000	196.55
33640	5998	4.2	2000	196.55
33641	5997	4.3	2000	196.55
33642	5998	4.4	2000	196.55
33643	5997	4.5	2000	196.55
33644	5997.5	4.6	2000	196.55
33645	5997	4.7	2000	196.55
33646	5997.5	4.8	2000	196.55
33647	5997.5	4.9	2000	196.55
33648	5997	5	2000	196.55
33649	5997	5.1	2000	196.55
33650	5996.5	5.2	2000	196.55
33651	5996.5	5.3	2000	196.55
33652	5997.5	5.4	2000	196.55
33653	5996.5	5.5	2000	196.55
33654	5997	5.6	2000	196.55
33655	5997	5.7	2000	196.55
33656	5996	5.8	2000	196.55
33657	5996.5	5.9	2000	196.55
33658	5997	6	2000	196.55
33659	6000	6.1	2000	196.55
33714	0.5	0	3000	196.55
33715	8.5	0.1	3000	196.55
33716	118.5	0.2	3000	196.55
33717	260	0.3	3000	196.55
33718	471.5	0.4	3000	196.55
33719	706.5	0.5	3000	196.55
33720	984.5	0.6	3000	196.55
33721	1320	0.7	3000	196.55
33722	1650	0.8	3000	196.55
33723	1956.5	0.9	3000	196.55
33724	2289	1	3000	196.55
33725	2627	1.1	3000	196.55
33726	2975.5	1.2	3000	196.55
33727	3322.5	1.3	3000	196.55
33728	3629	1.4	3000	196.55
33729	3965.5	1.5	3000	196.55
33730	4309	1.6	3000	196.55
33731	4642	1.7	3000	196.55

33732	4978.5	1.8	3000	196.55
33733	5318.5	1.9	3000	196.55
33734	5627.5	2	3000	196.55
33735	5957	2.1	3000	196.55
33736	6015.5	2.2	3000	196.55
33737	6014.5	2.3	3000	196.55
33738	6014	2.4	3000	196.55
33739	6015.5	2.5	3000	196.55
33740	6014	2.6	3000	196.55
33741	5990	2.7	3000	196.55
33742	5991	2.8	3000	196.55
33743	5988.5	2.9	3000	196.55
33744	5989	3	3000	196.55
33745	5988	3.1	3000	196.55
33746	5990	3.2	3000	196.55
33747	6000	3.3	3000	196.55
33809	0	0	4000	196.55
33810	18.5	0.1	4000	196.55
33811	134	0.2	4000	196.55
33812	285.5	0.3	4000	196.55
33813	496	0.4	4000	196.55
33814	741	0.5	4000	196.55
33815	1050	0.6	4000	196.55
33816	1385.5	0.7	4000	196.55
33817	1769	0.8	4000	196.55
33818	2207.5	0.9	4000	196.55
33819	2645	1	4000	196.55
33820	3093.5	1.1	4000	196.55
33821	3523	1.2	4000	196.55
33822	3979.5	1.3	4000	196.55
33823	4430.5	1.4	4000	196.55
33824	4876	1.5	4000	196.55
33825	5322.5	1.6	4000	196.55
33826	5758.5	1.7	4000	196.55
33827	6018	1.8	4000	196.55
33828	6019	1.9	4000	196.55
33829	6020	2	4000	196.55
33830	6021	2.1	4000	196.55
33831	5991.5	2.2	4000	196.55
33832	5969	2.3	4000	196.55
33833	5971.5	2.4	4000	196.55
33834	5982.5	2.5	4000	196.55

33835	6009	2.6	4000	196.55
33836	6008	2.7	4000	196.55
33837	6011	2.8	4000	196.55
33838	6010.5	2.9	4000	196.55
33839	6013.5	3	4000	196.55
33840	6013.5	3.1	4000	196.55
33841	5981.5	3.2	4000	196.55
33842	5981.5	3.3	4000	196.55
33843	5977.5	3.4	4000	196.55
33844	5988	3.5	4000	196.55
33845	6002.5	3.6	4000	196.55
33846	6007	3.7	4000	196.55
33847	6007.5	3.8	4000	196.55
33848	6007	3.9	4000	196.55
33849	6006.5	4	4000	196.55
33850	6007	4.1	4000	196.55
33851	6006.5	4.2	4000	196.55
33852	6006.5	4.3	4000	196.55
33853	5998.5	4.4	4000	196.55
33854	5999	4.5	4000	196.55

Table A-2. *Digital Hydraulic Valve Test Data.*

Time (sec)	Position Error (um)	Position (um)	Pressure (psi)	Oil Temp (°C)
63.777	0	0	10.244	24.584
63.88	0	0	10.244	24.561
63.982	0	0	10.248	24.639
64.086	0	0	10.25	24.686
64.211	0	0	10.248	24.651
64.277	0	0	10.25	24.587
64.375	0	0	10.248	24.63
64.484	0	0	10.25	24.557
64.576	0	0	10.251	24.644
64.672	0	0	10.251	24.679
64.775	-0.5	-10	10.251	24.64
64.874	-0.5	-10	10.252	24.634
64.989	-0.5	-10	10.251	24.582
65.079	-0.5	-10	10.251	24.587
65.175	-0.5	-10	10.251	24.627
65.274	-0.5	-10	10.25	24.651
65.376	-0.5	-10	10.252	24.603
65.49	-0.5	-10	10.252	24.652
65.594	-0.5	-10	10.252	24.547
65.674	-0.5	-10	10.253	24.618
65.774	-0.5	-20	10.252	24.669
65.874	-0.5	-20	10.253	24.646
66.07	-0.5	-20	10.252	24.731
66.143	-0.5	-20	10.253	24.633
66.211	-0.5	-20	10.255	24.704
66.278	-0.5	-20	10.255	24.641
66.379	-0.5	-20	10.255	24.602
66.478	-0.5	-20	10.258	24.675
66.585	-0.5	-20	10.261	24.595
66.674	-0.5	-30	10.261	24.656
66.775	-0.5	-30	10.265	24.707
66.875	-0.5	-30	10.272	24.669
66.996	-0.5	-30	10.286	24.612
67.088	-0.5	-30	10.305	24.582
67.173	-0.5	-30	10.313	24.601
67.273	-0.5	-30	10.319	24.64
67.375	-0.5	-30	10.321	24.698

67.531	0.5	-40.5	10.324	24.611
67.648	0.5	-40.5	10.325	24.731
67.723	0.5	-40.5	10.324	24.663
67.796	0.5	-40.5	10.328	24.603
67.875	0.5	-40.5	10.341	24.77
68.049	0.5	-40.5	10.36	24.693
68.125	0.5	-40.5	10.387	24.765
68.25	0.5	-40.5	10.395	24.638
68.334	0.5	-40.5	10.398	24.55
68.407	0.5	-40.5	10.408	24.618
68.533	0	-50	10.422	24.697
68.611	0	-50	10.441	24.58
68.689	0	-50	10.456	24.708
68.775	0	-50	10.45	24.728
68.915	0	-50	10.463	24.685
68.989	0	-50	10.474	24.638
69.134	0	-50	10.496	24.67
69.204	0	-50	10.527	24.6
69.274	0	-50	10.54	24.612
69.376	0	-60	10.543	24.687
69.531	0	-60	10.549	24.634
69.609	0	-60	10.556	24.799
69.684	0	-60	10.583	24.51
69.779	0	-60	10.606	24.714
69.874	0	-60	10.614	24.537
69.983	0	-60	10.618	24.501
70.083	0	-60	10.617	24.651
70.216	0	-60	10.624	24.608
70.283	-0.5	-70	10.65	24.507
70.376	-0.5	-70	10.665	24.705
70.483	-0.5	-70	10.689	24.712
70.589	-0.5	-70	10.692	24.633
70.673	-0.5	-70	10.693	24.744
70.777	-0.5	-70	10.706	24.752
70.876	-0.5	-70	10.736	24.707
70.983	-0.5	-70	10.757	24.721
71.082	-0.5	-70	10.764	24.673
71.176	0	-79.5	10.767	24.703
71.279	0	-79.5	10.778	24.681
71.412	0	-79.5	10.804	24.772
71.486	0	-79.5	10.816	24.518
71.646	0	-79.5	10.834	24.653

71.725	0	-79.5	10.838	24.594
71.795	0	-79.5	10.846	24.552
71.874	0	-79.5	10.855	24.634
71.977	0	-79.5	10.89	24.67
72.09	0	-90	10.904	24.767
72.184	0	-90	10.908	24.635
72.274	0	-90	10.91	24.639
72.378	0	-90	10.92	24.703
72.474	0	-90	10.954	24.633
72.629	0	-90	10.98	24.684
72.708	0	-90	10.983	24.676
72.785	0	-90	10.995	24.631
72.876	0	-90	11.019	24.703
72.983	0	-100	11.05	24.69
73.082	0	-100	11.055	24.721
73.188	0	-100	11.06	24.592
73.276	0	-100	11.09	24.751
73.375	0	-100	11.126	24.741
73.478	0	-100	11.129	24.821
73.585	0	-100	11.131	24.715
73.686	0	-100	11.154	24.732
73.812	0	-100	11.183	24.699
73.884	0.5	-110.5	11.197	24.73
73.976	0.5	-110.5	11.202	24.691
74.096	0.5	-110.5	11.207	24.692
74.181	0.5	-110.5	11.251	24.741
74.279	0.5	-110.5	11.28	24.693
74.374	0.5	-110.5	11.325	24.719
74.477	0.5	-110.5	11.35	24.543
74.631	0.5	-110.5	11.386	24.663
74.711	0.5	-110.5	11.419	24.705
74.786	-0.5	-120	11.43	24.706
74.877	-0.5	-120	11.452	24.64
74.974	-0.5	-120	11.485	24.608
75.171	-0.5	-120	11.497	24.693
75.246	-0.5	-120	11.534	24.637
75.324	-0.5	-120	11.564	24.701
75.391	-0.5	-120	11.57	24.747
75.477	-0.5	-120	11.589	24.682
75.58	-0.5	-120	11.624	24.503
75.687	-0.5	-120	11.642	24.672
75.78	0	-130	11.649	24.67

75.876	0	-130	11.668	24.721
75.974	0	-130	11.705	24.808
76.135	0	-130	11.717	24.68
76.214	0	-130	11.728	24.75
76.326	0	-130	11.761	24.695
76.401	0	-130	11.787	24.569
76.476	0	-130	11.794	24.807
76.632	0	-140.5	11.824	24.764
76.713	0	-140.5	11.85	24.7
76.738	0	-140.5	11.862	24.715
76.876	0	-140.5	11.866	24.68
76.976	0	-140.5	11.895	24.658
77.149	0	-140.5	11.931	24.685
77.223	0	-140.5	11.947	24.686
77.302	0	-140.5	11.985	24.812
77.382	0	-140.5	12.006	24.677
77.515	0	-140.5	12.013	24.843
77.589	0.5	-151	12.037	24.699
77.749	0.5	-151	12.067	24.719
77.82	0.5	-151	12.078	24.672
77.889	0.5	-151	12.084	24.685
77.976	0.5	-151	12.117	24.659
78.08	0.5	-151	12.148	24.737
78.185	0.5	-151	12.155	24.765
78.279	0.5	-151	12.18	24.725
78.376	0.5	-151	12.215	24.756
78.476	-0.5	-159.5	12.229	24.637
78.587	-0.5	-159.5	12.233	24.687
78.734	-0.5	-159.5	12.262	24.647
78.809	-0.5	-159.5	12.3	24.745
78.879	-0.5	-159.5	12.314	24.617
78.977	-0.5	-159.5	12.36	24.635
79.686	-0.5	-170	12.376	24.795
79.764	-0.5	-170	12.41	24.607
79.839	-0.5	-170	12.443	24.713
79.907	-0.5	-170	12.451	24.673
79.974	-0.5	-170	12.478	24.587
80.042	-0.5	-170	12.508	24.726
80.11	-0.5	-170	12.523	24.669
80.178	-0.5	-170	12.546	24.661
80.248	-0.5	-170	12.591	24.675
80.315	0	-180	12.601	24.659

80.386	0	-180	12.634	24.598
80.454	0	-180	12.667	24.628
80.521	0	-180	12.675	24.595
80.589	0	-180	12.701	24.667
80.657	0	-180	12.733	24.73
80.725	0	-180	12.74	24.697
80.848	0	-180	12.759	24.691
80.927	0	-180	12.798	24.715
81.039	0	-180	12.816	24.676
81.165	0	-180	12.839	24.703
81.239	0	-190	12.874	24.686
81.315	0	-190	12.887	24.684
81.39	0	-190	12.896	24.687
81.465	0	-190	12.906	24.72
81.593	0	-190	12.944	24.698
81.667	0	-190	12.96	24.788
81.735	0	-190	12.97	24.628
81.859	0	-190	13.004	24.736
81.934	0	-190	13.03	24.775
82.013	0	-190	13.039	24.634
82.082	0	-190	13.062	24.683
82.174	-0.5	-199.5	13.093	24.725
82.279	-0.5	-199.5	13.102	24.796
82.383	-0.5	-199.5	13.111	24.794
82.475	-0.5	-199.5	13.146	24.693
82.575	-0.5	-199.5	13.181	24.652
82.675	-0.5	-199.5	13.201	24.67
82.775	-0.5	-199.5	13.245	24.686
82.883	-0.5	-199.5	13.255	24.679
82.984	-0.5	-199.5	13.292	24.589
83.077	-0.5	-209.5	13.319	24.665
83.173	-0.5	-209.5	13.327	24.729
83.275	-0.5	-209.5	13.344	24.702
83.385	-0.5	-209.5	13.386	24.76
83.484	-0.5	-209.5	13.401	24.765
83.573	-0.5	-209.5	13.436	24.821
83.711	-0.5	-209.5	13.474	24.654
83.779	-0.5	-209.5	13.481	24.759
83.931	0	-220	13.524	24.756
84.004	0	-220	13.546	24.632
84.082	0	-220	13.549	24.611
84.173	0	-220	13.581	24.735

84.278	0	-220	13.612	24.73
84.385	0	-220	13.623	24.805
84.486	0	-220	13.66	24.659
84.574	0	-220	13.694	24.676
84.679	0	-220	13.71	24.794
84.775	0	-220	13.743	24.621
84.887	0.5	-230	13.765	24.63
84.98	0.5	-230	13.772	24.655
85.077	0.5	-230	13.794	24.634
85.172	0.5	-230	13.834	24.754
85.274	0.5	-230	13.843	24.642
85.432	0.5	-230	13.877	24.753
85.529	0.5	-230	13.907	24.656
85.603	0.5	-230	13.92	24.785
85.673	0.5	-230	13.946	24.775
85.773	0	-239.5	13.981	24.682
85.95	0	-239.5	13.987	24.707
86.074	0	-239.5	13.993	24.597
86.155	0	-239.5	14.041	24.855
86.229	0	-239.5	14.06	24.698
86.298	0	-239.5	14.088	24.716
86.43	0	-239.5	14.126	24.761
86.546	0	-239.5	14.145	24.731
86.623	0	-239.5	14.181	24.809
86.691	0	-250	14.205	24.585
86.773	0	-250	14.208	24.7
86.951	0	-250	14.236	24.662
87.024	0	-250	14.276	24.643
87.099	0	-250	14.285	24.693
87.172	0	-250	14.328	24.715
87.276	0	-250	14.348	24.638
87.38	0	-250	14.36	24.649
87.48	0	-250	14.398	24.765
87.578	0	-260	14.422	24.651
87.678	0	-260	14.428	24.766
87.773	0	-260	14.441	24.855
87.882	0	-260	14.482	24.776
87.98	0	-260	14.5	24.706
88.072	0	-260	14.527	24.669
88.177	0	-260	14.565	24.726
88.273	0	-260	14.576	24.794
88.38	0	-260	14.605	24.957

88.481	0	-270	14.638	24.785
88.577	0	-270	14.646	24.546
88.673	0	-270	14.655	24.739
88.775	0	-270	14.697	24.912
88.882	0	-270	14.718	24.77
88.981	0	-270	14.733	24.803
89.074	0	-270	14.771	24.704
89.212	0	-270	14.792	24.655
89.28	0	-270	14.803	24.686
89.376	0	-270	14.839	24.698
89.479	-0.5	-280	14.861	24.908
89.58	-0.5	-280	14.865	24.601
89.675	-0.5	-280	14.876	24.757
89.774	-0.5	-280	14.923	24.739
89.873	-0.5	-280	14.937	24.763
89.981	-0.5	-280	14.95	24.884
90.032	-0.5	-280	14.983	24.691
90.177	-0.5	-280	15.009	24.644
90.276	-0.5	-280	15.016	24.701
90.387	-0.5	-290.5	15.027	24.656
90.481	-0.5	-290.5	15.054	24.577
90.599	-0.5	-290.5	15.079	24.617
90.676	-0.5	-290.5	15.085	24.612
90.776	-0.5	-290.5	15.093	24.72
90.884	-0.5	-290.5	15.127	24.708
91.036	-0.5	-290.5	15.147	24.899
91.163	-0.5	-290.5	15.158	24.829
91.241	0	-300	15.169	24.693
91.31	0	-300	15.188	24.672
91.382	0	-300	15.188	24.604
91.542	0	-300	15.222	24.678
91.621	0	-300	15.232	24.756
91.698	0	-300	15.235	24.754
91.787	0	-300	15.248	24.713
91.874	0	-300	15.282	24.669
91.987	0	-300	15.302	24.529
92.171	0	-310	15.305	24.852
92.249	0	-310	15.314	24.786
92.319	0	-310	15.329	24.763
92.389	0	-310	15.342	24.854
92.482	0	-310	15.365	24.664
92.587	0	-310	15.377	24.796

92.672	0	-310	15.378	24.704
92.777	0	-310	15.388	24.631
92.876	0	-310	15.404	24.694
92.985	0	-310	15.428	24.83
93.084	-0.5	-320.5	15.446	24.628
93.175	-0.5	-320.5	15.448	24.72
93.277	-0.5	-320.5	15.451	24.666
93.374	-0.5	-320.5	15.454	24.68
93.484	-0.5	-320.5	15.455	24.604
93.584	-0.5	-320.5	15.484	24.699
93.674	-0.5	-320.5	15.504	24.731
93.776	-0.5	-320.5	15.511	24.771
93.874	-0.5	-320.5	15.524	24.699
93.989	0.5	-330	15.525	24.638
94.089	0.5	-330	15.525	24.796
94.174	0.5	-330.5	15.531	24.737
94.274	0.5	-330.5	15.544	24.654
94.378	0	-329.5	15.555	24.657
94.482	0	-329.5	15.574	24.811
94.636	0	-330	15.587	24.818
94.711	0	-330	15.594	24.721
94.784	0	-330	15.598	24.662
94.913	0	-330	15.599	24.614

Table A-3. *Flow Across the Spool Data.*

Position (um)	Time Lapse		Volume (ml)	Flow (ml/sec)
	min	sec		
0	0	26.46	50	1.8896447
10	0	26.96	50	1.8545994
20	0	29.19	50	1.7129154
30	0	27.34	50	1.8288222
40	0	28.78	50	1.7373176
50	0	33.00	50	1.5151515
60	0	31.13	50	1.6061677
70	0	29.84	50	1.6756032
80	0	31.65	50	1.5797788
90	0	33.75	50	1.4814815
100	0	33.31	50	1.5010507
110	0	38.12	50	1.3116474
120	0	38.75	50	1.2903226
130	0	36.60	50	1.3661202
140	0	44.28	50	1.1291780
150	0	48.78	50	1.0250103
160	0	45.00	50	1.1111111
170	0	45.60	50	1.0964912
180	0	51.31	50	0.9744689
190	0	54.18	50	0.9228498
200	1	2.00	50	0.8064516
210	0	36.87	25	0.6780580
220	0	33.71	25	0.7416197
230	0	35.47	25	0.7048210
240	0	54.22	25	0.4610845
250	0	46.91	25	0.5329354
260	1	9.44	25	0.3600230
270	0	39.84	10	0.2510040
280	0	39.85	10	0.2509410
290	0	41.03	10	0.2437241
300	0	41.69	10	0.2398657
310	0	43.09	10	0.2320724
320	0	43.03	10	0.2323960

Table A-4. *Flow Across the Check Ball Data*

Position (um)	Time Lapse (min)	Time Lapse (sec)	Volume (ml)	Flow (ml/sec)
10	3	27.66	1	0.0048156
20	1	47.10	1	0.0093371
30	1	8.06	1	0.0146929
40	0	36.22	1	0.0276091
50	0	23.32	1	0.0428816
60	0	35.31	2	0.0566412
70	0	32.60	2	0.0613497
80	0	12.28	2	0.1628664
90	0	53.16	5	0.0940557
100	0	46.38	5	0.1078051
110	0	40.00	5	0.1250000
120	0	32.82	5	0.1523461
130	0	30.25	5	0.1652893
140	0	25.84	5	0.1934985
150	0	47.63	10	0.2099517
160	0	44.96	10	0.2224199
170	0	31.72	10	0.3152585
180	0	30.07	10	0.3325574
190	0	29.34	10	0.3408316
200	0	27.90	10	0.3584229
210	0	26.44	10	0.3782148
220	0	22.18	10	0.4508566
230	0	42.35	20	0.4722550
240	0	41.12	20	0.4863813
250	0	30.13	20	0.6637902
260	0	34.44	20	0.5807201
270	0	33.66	20	0.5941771
280	0	33.28	20	0.6009615
290	0	30.75	20	0.6504065
300	0	30.85	20	0.6482982
310	0	30.66	20	0.6523157
320	0	29.25	20	0.6837607

Figure A-1. *LabView Control Panel.*

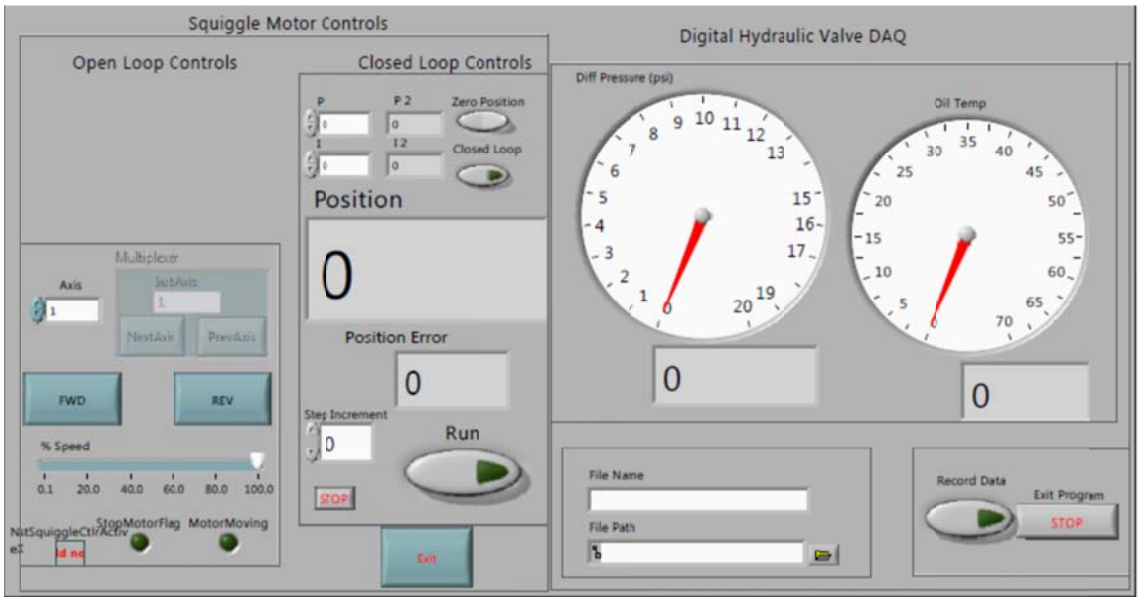

Figure A-2. *LabView Program Code.*